VPDES PERMIT PROGRAM FACT SHEET

FILE NO: 726

This document gives pertinent information concerning the VPDES Permit listed below. This permit is being processed as a **MAJOR, INDUSTRIAL** permit.

1. **PERMIT NO.**: VA0004081 **EXPIRATION DATE**: March 19, 2017

2. **FACILITY NAME AND LOCAL MAILING ADDRESS**

Dominion-Chesapeake Energy Center
5000 Dominion Blvd.
Glen Allen, VA 23060

CONTACT AT FACILITY:
NAME: Paula Hamel
TITLE: Director, Generation Environmental Services
PHONE: (804)273-2929
EMAIL: **paula.a.hamel@dom.com**

FACILITY LOCATION ADDRESS (IF DIFFERENT)

2701 Vepco Street
Chesapeake, VA 23320

CONTACT AT LOCATION ADDRESS
NAME: Amelia Boschen
TITLE: Environmental Specialist III
PHONE: (804)273-3485
EMAIL: **Amelia.h.boschen@dom.com**

3. **OWNER CONTACT**: (TO RECEIVE PERMIT)
NAME: Paula Hamel
TITLE: Same as Above
COMPANY NAME: Dominion Virginia Power-Glen Allen
ADDRESS: 5000 Dominion Blvd.
Glen Allen, VA 23060
PHONE: ( )
EMAIL:

CONSULTANT CONTACT:
NAME:
FIRM NAME:
ADDRESS:
PHONE: ( )
EMAIL:

4. **PERMIT DRAFTED BY**: DEQ, Water Permits, Tidewater Regional Office

Permit Writer(s): Melinda Woodruff Date(s): 6/2/2016
Reviewed By: Janet Weyland Date(s): 6/2/2016

5. **PERMIT ACTION:**

( ) Issuance ( ) Reissuance ( ) Revoke & Reissue (x) Owner Modification
( ) Board Modification ( ) Change of Ownership/Name [Effective Date:]

6. **SUMMARY OF SPECIFIC ATTACHMENTS LABELED AS:**

Attachment 1	Site Inspection Report/Memorandum
Attachment 2	Discharge Location/Topographic Map
Attachment 3	Schematic/Plans & Specs/Site Map/Water Balance
Attachment 4	TABLE I - Discharge/Outfall Description
Attachment 5	TABLE II - Effluent Monitoring/Limitations
Attachment 6	Effluent Limitations/Monitoring Rationale/Suitable Data/Antidegradation/Antibacksliding
Attachment 7	Special Conditions Rationale
Attachment 8	Toxics Monitoring/Toxics Reduction/WET Limit Rationale
Attachment 9	Material Stored
Attachment 10	Receiving Waters Info./Tier Determination/STORET Data/Stream Modeling
Attachment 11	303(d) Listed Segments
Attachment 12	TABLE III(a) and TABLE III(b) - Change Sheets
Attachment 13	NPDES Industrial Permit Rating Worksheet
Attachment 14	Chronology Sheet
Attachment 15	Public Participation

APPLICATION COMPLETE: September 9, 2015

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7. **PERMIT CHARACTERIZATION:** (Check as many as appropriate)

(x) Existing Discharge
(x) Proposed Discharge
( ) Municipal
SIC Code(s)
(x) Industrial
SIC Code(s) 4911
( ) POTW
( ) PVOTW
(x) Private
( ) Federal
( ) State
( ) Publicly-Owned Industrial

(x) Effluent Limited
(x) Water Quality Limited
(x) WET Limit
( ) Interim Limits in Permit
( ) Interim Limits in Other Document
( ) Compliance Schedule Required
(x) Site Specific WQ Criteria
( ) Variance to WQ Standards
( ) Water Effects Ratio
(x) Discharge to 303(d) Listed Segment
(x) Toxics Management Program Required
( ) Toxics Reduction Evaluation
(x) Storm Water Management Plan
( ) Pretreatment Program Required
( ) Possible Interstate Effect
( ) CBP Significant Dischargers List

8. **RECEIVING WATERS CLASSIFICATION:** River basin information.

Outfall No(s): 002 (incl. 201 and 207), 013, 015, 018, 021

Receiving Stream: Deep Creek to the Southern Branch of the Elizabeth River
River Mile: See Attachment 10
Basin: James River (Lower)
Subbasin: NA
Section: 1d
Class: II
Special Standard(s): a, z
Tidal: YES
7-Day/10-Year Low Flow: NA
1-Day/10-Year Low Flow: NA
30-Day/5-Year Low Flow: NA
Harmonic Mean Flow: NA

Outfall No(s): 003 (incl. 301), 010, 011, 012, 016, 017, 030

Receiving Stream: Southern Branch of the Elizabeth River
River Mile: See Attachment 10
Basin: James River (Lower)
Subbasin: NA
Section: 1d
Class: II
Special Standard(s): a, z
Tidal: YES
7-Day/10-Year Low Flow: NA
1-Day/10-Year Low Flow: NA
30-Day/5-Year Low Flow: NA
Harmonic Mean Flow: NA

9. **FACILITY DESCRIPTION:** Describe the type facility from which the discharges originate.

THE MODIFICATION CONSISTS OF proposal to cease wastewater and cooling water discharges previously associated with operation of an electrical utility facility and to discharge treated wastewater and stormwater associated with decommissioning activities at the closed electrical utility facility.

10. **LICENSED OPERATOR REQUIREMENTS:** (x) No ( ) Yes Class:

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11. **RELIABILITY CLASS:** Industrial Facility - NA

12. **SITE INSPECTION DATE:** 12/16/13; Site visit 05/17/2015 REPORT **DATE:** 1/2/14; 6/29/15

Performed By: Steve Long, Compliance; Melinda Woodruff, Water Permits

SEE ATTACHMENT 1

13. **DISCHARGE(S) LOCATION DESCRIPTION:** Provide USGS Topo which indicates the discharge location, significant (large) discharger(s) to the receiving stream, water intakes, and other items of interest.

Name of Topo: Norfolk South Quadrant No.: 35D **SEE ATTACHMENT 2**

14. **ATTACH A SCHEMATIC OF THE WASTEWATER TREATMENT SYSTEM(S) [IND. & MUN.]. FOR INDUSTRIAL FACILITIES, PROVIDE A GENERAL DESCRIPTION OF THE PRODUCTION CYCLE(S) AND ACTIVITIES. FOR MUNICIPAL FACILITIES, PROVIDE A GENERAL DESCRIPTION OF THE TREATMENT PROVIDED.**

SEE ATTACHMENT 3 (CAN ALSO REFERENCE TABLE I)

15. **DISCHARGE DESCRIPTION:** Describe each discharge originating from this facility.

SEE TABLE I (OR CAN SUBSTITUTE PAGE 2C) - **SEE ATTACHMENT 4**

16. **COMBINED TOTAL FLOW:**

TOTAL: 1.5 MGD (for public notice)

PROCESS FLOW: 1.4 MGD (IND.)

NONPROCESS/RAINFALL DEPENDENT FLOW: 0.1 (Est.)

17. **STATUTORY OR REGULATORY BASIS FOR EFFLUENT LIMITATIONS AND SPECIAL CONDITIONS:** (Check all which are appropriate)

X State Water Control Law
X Clean Water Act
X VPDES Permit Regulation (9 VAC 25-31-10 et seq.)
X EPA NPDES Regulation (Federal Register)
X EPA Effluent Guidelines (40 CFR 133 or 400 - 471)
X Water Quality Standards (9 VAC 25-260-5 et seq.)
___ Wasteload Allocation from a TMDL or River Basin Plan

18. **EFFLUENT LIMITATIONS/MONITORING:** Provide all limitations and monitoring requirements being placed on each outfall.

SEE TABLE II - ATTACHMENT 5

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19. **EFFLUENT LIMITATIONS/MONITORING RATIONALE**: Attach any analyses of an outfall by individual toxic parameter. As a minimum, it will include: statistics summary (number of data values, quantification level, expected value, variance, covariance, 97th percentile, and statistical method); wasteload allocation (acute, chronic and human health); effluent limitations determination; input data listing. Include all calculations used for each outfall and set of effluent limits and those used in any model(s). Include all calculations/documentation of any antidegradation or anti-backsliding issues in the development of any limitations; complete the review statements below. Provide a rationale for limiting internal waste streams and indicator pollutants. Attach chlorine mass balance calculations, if performed. Attach any additional information used to develop the limitations, including any applicable water quality standards calculations (acute, chronic and human health).

OTHER CONSIDERATIONS IN LIMITATIONS DEVELOPMENT:

VARIANCES/ALTERNATE LIMITATIONS: Provide justification or refutation rationale for requested variances or alternatives to required permit conditions/limitations. This includes, but is not limited to: waivers from testing requirements; variances from technology guidelines or water quality standards; WER/translator study consideration; variances from standard permit limits/conditions.

N/A

SUITABLE DATA: In what, if any, effluent data were considered in the establishment of effluent limitations and provide all appropriate information/calculations.

All suitable effluent data were reviewed.

ANTIDEGRADATION REVIEW: Provide all appropriate information/calculations for the antidegradation review.

The receiving stream has been classified as tier 1, therefore, no further review is needed. Permit limits have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

ANTIBACKSLIDING REVIEW: Indicate if antibacksliding applies to this permit and, if so, provide all appropriate information.

Backsliding applies to this permit but conforms to the anti-backsliding provisions of Section 402 (o) of the Clean Water Act, 9 VAC 25-31-220 L. of the VPDES Permit regulation and 40 CFR 122.44 (l).

SEE ATTACHMENT 6

20. **SPECIAL CONDITIONS RATIONALE**: Provide a rationale for each of the permit's special conditions.

SEE ATTACHMENT 7

21. **TOXICS MONITORING/TOXICS REDUCTION AND WET LIMIT SPECIAL CONDITIONS RATIONALE**: Provide the justification for any toxics monitoring program and/or toxics reduction program and WET limit.

SEE ATTACHMENT 8

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22. **SLUDGE DISPOSAL PLAN**: Provide a description of the sludge disposal plan (e.g., type sludge, treatment provided and disposal method). Indicate if any of the plan elements are included within the permit.

N/A

23. **MATERIAL STORED**: List the type and quantity of wastes, fluids, or pollutants being stored at this facility. Briefly describe the storage facilities and list, if any, measures taken to prevent the stored material from reaching State waters.

SEE ATTACHMENT 9

24. **RECEIVING WATERS INFORMATION**: Refer to the State Water Control Board's Water Quality Standards [e.g., River Basin Section Tables (9 VAC 25-260-5 et seq.). **Use 9 VAC 25-260-140 C (introduction and numbered paragraph) to address tidal waters where fresh water standards would be applied or transitional waters where the most stringent of fresh or salt water standards would be applied.** Attach any memoranda or other information which helped to develop permit conditions (i.e. tier determinations, PReP complaints, special water quality studies, STORET data and other biological and/or chemical data, etc.

SEE ATTACHMENT 10

25. 305(b)/**303(d) Listed Segments**: Indicate if the facility discharges to a segment that is listed on the current 303(d) list and, if so, provide all appropriate information/calculations.

Outfalls 002-003 and 015, 018 and 021 discharge to impaired stream segment VAT-G15E_DEC01A06. Deep Creek is impaired Category 4A (has an approved TMDL) for Aquatic Life and Open Water Use for Dissolved Oxygen. Fish Consumption Use is impaired Category 5A (needing a TMDL) for PCBs and TCDD.

SEE ATTACHMENT 11

26. **CHANGES TO PERMIT**: Use **TABLE III(a)** to record any changes from the previous permit and the rationale for those changes. Use **TABLE III(b)** to record any changes made to the permit during the permit processing period and the rationale for those changes [i.e., use for comments from the applicant, VDH, EPA, other agencies and/or the public where comments resulted in changes to the permit limitations or any other changes associated with the special conditions or reporting requirements].

SEE ATTACHMENT 12

27. **NPDES INDUSTRIAL PERMIT RATING WORKSHEET**:

TOTAL SCORE: 600 **SEE ATTACHMENT 13, Brought forward from the last reissuance**

28. **DEQ PLANNING COMMENTS RECEIVED ON DRAFT PERMIT**: Document any comments received from DEQ planning.

The discharge is in conformance with the existing planning documents for the area.

29. **PUBLIC PARTICIPATION**: Document comments/responses received during the public participation process. If comments/responses provided, especially if they result in changes to the permit, place in the attachment.

VDH/DSS COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the Virginia Dept. of Health and the Div. of Shellfish Sanitation and noted how resolved.

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By letter dated March 24, 2015, the VDH provided the following comments: There are no apparent impacts to waterworks sources as a result of this permit.

The DSS provided comments by letter dated April 7, 2015. The project is located in or adjacent to condemned shellfish growing waters and the activity, as described, will not cause an increase in the size or type of the existing closure.

EPA COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the U.S. Environmental Protection Agency and noted how resolved.

Draft permit and fact sheet provided on June 3, 2016 to EPA.

ADJACENT STATE COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from an adjacent state and noted how resolved.

Not Applicable.

OTHER AGENCY COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from any other agencies (e.g., VIMS, VMRC, DGIF, etc.) and noted how resolved.

Not Applicable.

OTHER COMMENTS RECEIVED FROM RIPARIAN OWNERS/CITIZENS ON DRAFT PERMIT: Document any comments received from other sources and note how resolved.

The application and draft permit have received public notice in accordance with the VPDES Permit Regulation. Section 9 VAC 35-31-310 of the VPDES Permit Regulation states, in part, "The Board shall hold a public hearing whenever it finds, on the basis of requests, a significant degree of public interest in a draft permit(s)."

DESCRIBE PN COMMENTS AND RESOLUTIONS: To Be Determined

Public Information Session Date: June 16, 2016
Public Hearing Date: July 7, 2016

PUBLIC NOTICE INFORMATION: Comment Period: Start Date June 3, 2016
End Date July 22, 2016

Persons may comment in writing or by e-mail to the DEQ on the proposed modification of the permit within 30 days from the date of the first notice. Address all comments to the contact person listed below. Written or e-mail comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The Director of the DEQ has decided to hold a public hearing.

All pertinent information is on file and may be inspected, and arrangements made for copying by contacting Melinda Woodruff at: Department of Environmental Quality (DEQ), Tidewater Regional Office, 5636 Southern Boulevard, Virginia Beach, VA 23462. Telephone: 757-518-2174 E-mail: ChesapeakeEnergyCenterWaterPermit@deq.virginia.gov

Following the hearing and the comment period, the Board will make a determination regarding the proposed modification at Fall 2016 State Water Control Board Meeting.

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30. **ADDITIONAL FACT SHEET COMMENTS/PERTINENT INFORMATION:**

For the permit action addressed by this fact sheet, this facility has been assigned the following classification for the purposes of determination of applicable permit processing and permit maintenance fees: INDUSTRIAL MAJOR

The basis for the specific classification is: The facility is in the midst of ceasing operations and has not quite closed down all process operations nor put into place the stormwater collection system.

This permit does include a WET Program. (A storm water screening, that includes WET tests is not in the WET program, but is subject to the $1000/year fee.

This facility has five or less external process wastewater outfalls.

Certain outfalls associated with the permit are **no** longer discharging and will no longer be included in the permit. See table below for the affected outfalls and for activities associated with these outfalls.

Outfall Number	**Discharges - No longer existing**
001	Once through condenser cooling water; hotwell dumps; internal outfall 101 discharges
101	Demineralizer regeneration wastewater; reverse osmosis wastewater
206	Sewage Treatment Plant
004 and 005	Screen backwash units
007, 008 and 009	River recirculation pits
019 and 020	Fish return lines - unaltered waters as they are drawn from the source supply
031	Uncontaminated river water from chlorination building area

This facility is considered a nonsignificant nutrient discharger. New nutrient monitoring conditions have been added to the permit in order to develop data necessary to reevaluate the Virginia point source WLAs included in the Chesapeake Bay TMDL. After a period of two years the facility will calculate the WLAs and compare the loadings to the current WIP. If the calculated facility loading value for TP, TN, or TSS exceeds the corresponding loading value in the current WIP, then the permittee shall develop a Chesapeake Bay TMDL Action Plan. As the loads for both nonsignificant industrial and municipals are refined, the WIP may be modified to include more current WLAs.

Closure of the Bottom Ash Pond may occur between this modification and the next reissuance of this permit. A new internal outfall, 207, was generated for this modification in order to monitor and limit the dewatering activities associated with the closure of the Bottom Ash Pond. A closure plan was submitted with the application for modification and is incorporated as an enforceable part of the permit. The closure of the Bottom Ash Pond shall be in accordance with: a) the closure plan submitted; b) the EPA "*Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule,*" 40 CFR Parts 257 and 261, effective October 19, 2015; and c) the December 4, 2015 amendments to the Virginia Solid Waste Management Regulations (VSWMR), where

applicable. Post closure care and maintenance will be addressed as required by the VSWMR and through the Virginia Solid Waste Permit (SWP) No. 440.

The new internal Outfall 207 will be limited and monitored in order to protect water quality. Effluent limits, including Whole Effluent Toxicity (WET) limits, are included in the permit for all constituents associated with coal combustion residuals for which water quality criteria exist. Where no water quality criteria exist, human health criteria were considered. Monitoring has also been proposed for the suite of parameters associated with coal combustion residuals for which there are no water quality criteria, and accordingly, no proposed effluent limits. While the WET sampling ensures that these parameters, as well as others that may cause toxicity, are accounted for in the sampling regime, sample results for these additional constituents will be helpful should toxicity be observed and for better understanding the full characteristics of the internal discharge. Monitoring for parameters with effluent limits are conducted at a frequency of three times per week. Monitoring for other parameters, including the WET testing, is once per month. Composite sampling for the additional pollutants will be conducted during the composite period for the WET testing.

The United States Environmental Protection Agency (EPA) conducted a Dam Safety Assessment in 2010 at Dominion Chesapeake Energy Center, and several other Dominion facilities, as a result of the Kingston Ash Dredge Cell failure in late 2008. As a result of the assessment, Dominion has repaired embankments and developed an annual inspection program in accordance with Virginia Department of Conservation and Recreation programs which regulate Dam Safety in Virginia. Dominion has also performed slope stability surveys (4/20/15) as part of the requirements of the VSWMR for closure of the ash landfill. The bottom ash pond was included as part of the surveys.

The coal pile area and associated stormwater runoff pond may be closed in 2016. During the next reissuance of the permit, the coal pile runoff pond should be closed, lined, and become a stormwater BMP pond. At that point, the discharge may be considered stormwater only from that area and limitations/monitoring requirements associated with the coal pile runoff may be removed from the requirements of the discharge at outfall 003.

In order to be consistent between the SWP No. 440 and this VPDES permit, new nomenclature for the active ponds at the site was established. The Oil/Water Retention Basin referred to in the SWP No. 440 as Low Volume Waste Pond will now be called the Stormwater/Leachate Basin A. The Stormwater Pond referred to in the SWP No. 440 as the Stormwater Basin will now be referred to as the Stormwater/Leachate Basin B. Please see map in Attachment 2.

Groundwater monitoring is being conducted pursuant to SWP No. 440.

The facility is permitted under VPDES Construction General Permit VAR10H671, issued December 23, 2015.

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ATTACHMENT 1

SITE INSPECTION REPORT/MEMORANDUM

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COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
5636 SOUTHERN BOULEVARD
VIRGINIA BEACH, VIRGINIA 23462
RECONNAISSANCE INSPECTION REPORT

FACILITY NAME: **Dominion – Chesapeake Energy Center**	PERMIT NUMBER: **VA0004081**
FACILITY ADDRESS: **2701 Vepco St. Chesapeake, VA 23320**	
INSPECTION DATE: **3/22/16**	REPORT DATE: **4/1/16**
INSPECTOR: **Steven J.E. Long**	REVIEWER: **Kenneth T. Raum / 04-04-16** KTR
PRESENT AT INSPECTION: **Sean Priest, Rachael Patton – DEQ** **Krystal D. Gill – Dominion, Environmental Compliance Coordinator**	

GENERAL OBSERVATIONS

This site visit was conducted in conjunction with DEQ staff members. Land Protection staff performed a regularly scheduled site inspection for the solid waste landfill. Ground Water staff also attended with sampling of the ground water monitoring being performed during the visit.

This report only documents the visit and those items observed during the visit. A majority of the site was not observed with demolition activities occurring in the main site area. One monitoring well was observed that is located east of the location of the old power generation building. The landfill was observed along with the adjacent oily waste pond and the bottom ash pond.

This facility is towards the end of decommissioning the site with the main energy generation building having been demolished. With the cessation of power generation most of the discharges associated with that process have been eliminated.

Stormwater discharges still remain and Outfall 002 is still active. Outfall 002 is still receiving some discharges from the low volume waste from the old wastewater collection at the power generation. A discharge to the oily waste pond was observed with the wastewater coming from Units 1-3 and four (4) sumps. The discharge to the oil waste pond was blackish in color and turbid. The oily waste pond was observed with oil sheens on parts of the surface. A boom was in place that captured some but not all of the oil. The effluent from this pond is subsurface preventing the discharge of the sheen to the bottom ash pond. The discharge to the bottom ash pond was also observed and found to be blackish and turbid too. The bottom ash pond also receives some of the landfill leachate. Discharge to the effluent structure at Outfall 002 was observed and found to be clear and colorless.

Bottom Ash pond referenced here is the sedimentation/Leachate Basin B
Oily Waste pond referenced here is the sedimentatation/Leachate Basin A

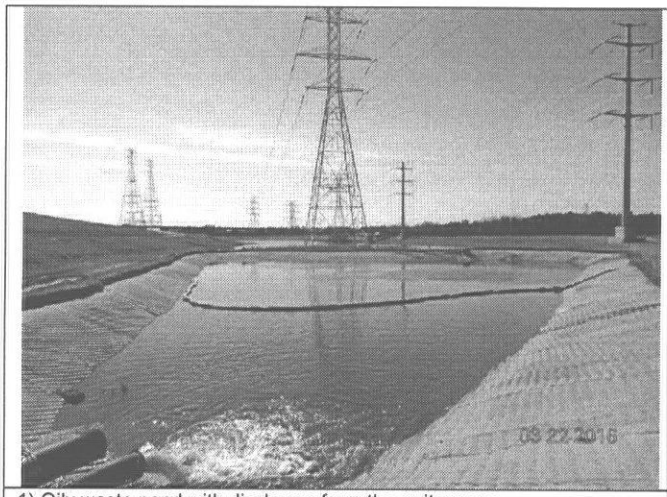
INSPECTION RECOMMENDATIONS

None noted. This report provided for internal records only.

PHOTOGRAPHS TAKEN? (See next page.)	YES	√	NO	

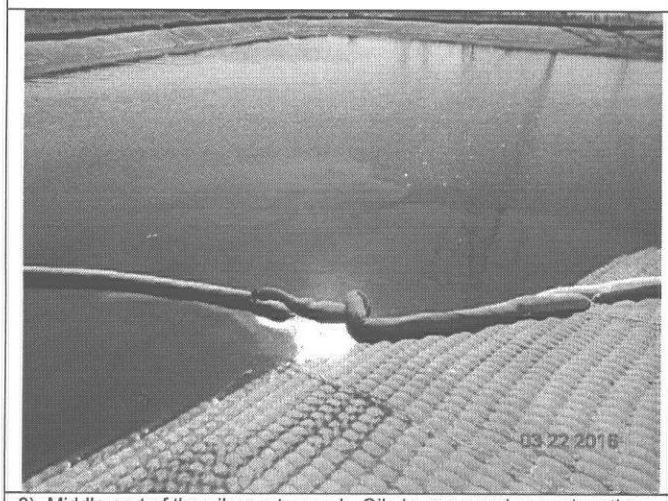
COPIES:

TIDEWATER REGIONAL OFFICE	√				

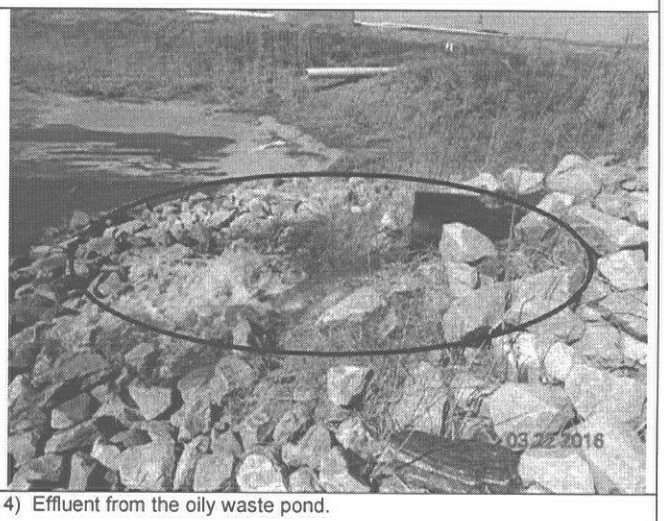


1) Oily waste pond with discharge from the unit sumps.

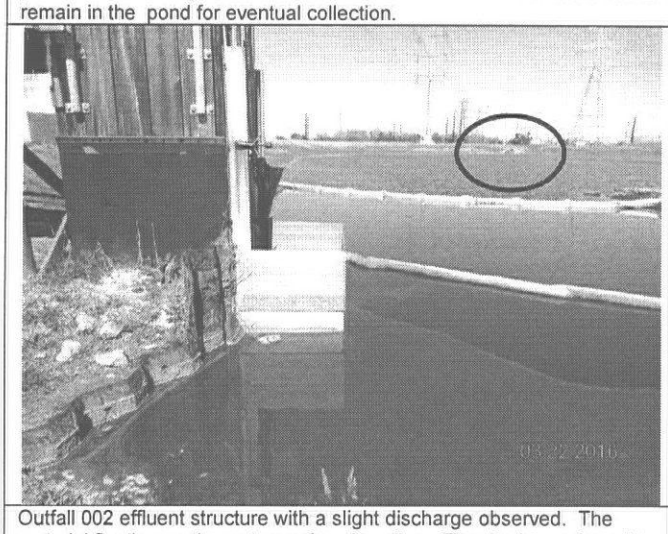
2) Blackish turbid discharge to the oily waste pond.



3) Middle part of the oily waste pond. Oil sheen was observed on the pond. The discharge from this structure is subsurface so that the oil will remain in the pond for eventual collection.



4) Effluent from the oily waste pond.



Outfall 002 effluent structure with a slight discharge observed. The material floating on the water surface is pollen. The discharge from the oily waste pond is in the background of this photo and is circled.

Memo

To: ECM File

From: Melinda Woodruff

Date: June 29, 2015

Re: Dominion – Chesapeake Energy Center Site Visit

VPDES No. VA0004081

On May 17, 2015, I went to Dominion Chesapeake Energy Center (CEC) facility to meet with Amelia Boschen and Krystal Gill to observe the decommissioning of the CEC site and go over the outfall descriptions for the modification for the VPDES permit no. VA0004081. We first went over the outfalls then went out in the field.

Outfalls in house discussion:

Outfalls 001 and 101 – will be deleted
Outfall 002 – agreed description is good, coal pile is down but not closed yet
Outfall 201 – agreed description is good
Outfall 206 – will be deleted
Outfall 003 – Add the word closed and I will look at the data
Outfall 301 – Add the word closed
Outfall 004 and 005 – will be deleted
Outfall 007, 008, and 009 – will be deleted
Outfall 010 – agreed description is good
Outfalls 011 and 012 – agreed description is good, no change
Outfalls 013, 015, 018, 021 – agreed description is good, no change
Outfalls 019 and 020 – will be deleted
Outfall 030 – agreed to move to no monitoring required with the above group of outfalls
Outfall 031 – will be deleted
Outfall 016 and 017 – add the treatment to 017 as per 016

Outfall 002 will stay where it is and not be moved during closure

Coal pile runoff pond associated with Outfall 003 – collects runoff water from the coal pile, can be pumped to the metals pond (201) or to the oil retention basin which gravity feeds to the sedimentation basin (002) or overflow out Outfall 003. This pond will be lined and used for a best management practice for storm water. The facility will construct the bmp after the closure of the coal pile area. The cap for the coal pile area will not be complete until 2016 and therefore the current status of the runoff pond will remain the same during this modification.

Bottom Ash Pond with Outfall 002 – Currently pre-cleaning out the sedimentation basin. The sedimentation basin has been divided into a north side and a south side. CEC has created a separator dike between the north and south side. The separator dike was installed for trucks to transport sediment if necessary. The areas are dry. If the basin becomes wet during the clean out process, the cleaned out sediment is placed in the ash pond to dry then removed

and deposited in the landfill. Since the area has remained dry for some time, CEC is thinking they will not have to discharge while lining the sedimentation basin when constructing the bmp stormwater/leachate pond during this modification. The plan is to do the same thing in dividing the basin into 2 sides during construction. If the area does require a discharge due to severe weather, CEC plans to submit a notification of anticipated by pass for approval.

Landfill leachate with Outfall 002 – The leachate collection system for the landfill will be upgraded during the time of the modification. This includes the ditches around the landfill structure that collect the storm water runoff from the landfill along with leachate collected through the current leachate collection system. This system already discharges through the Outfall 002 and has been included as part of the description for the Outfall from the existence of the permit. The difference will be the discharge will now go to a lined bmp rather than an unlined pond.

Combustion turbines with Outfall 003 – no exposure, all covered, only area of gravel and a ditch which would discharge storm water to outfall 003. The combustion turbines will remain at the site, operating for peak distribution only.

Bleach station with Outfall 031 – no longer in use, slight about of pump backwash from clean out remains. CEC will contact me to confirm that material has been removed from the tank. The Outfall is locked and no longer a discharge point. This outfall is considered closed.

We looked at a map and took a tour of the site. I verified the ongoing decommissioning activities at each outfall.

Outfall 011 and 0012 – able to view 011 but 012 is a ways out; these are representative and nothing with change with these outfalls during this modification. These are valved at the discharge point.

Outfall 003 – valved at the discharge point, coal dock has been cleaned but still can be operated if necessary; language will remain in the permit to include the dock. We discussed removing the language for coal pile runoff but since there is the possibility of overflow and the coal pile is not capped and closed, this language will remain in the permit as well.

Outfall 301 – valved from the dike area, secondary containment/lined. Tank is closed and the word "closed" has been added to the description for both 003 and 301. The tank maybe removed from site in the future but since the tank is still in place and the dike is a valved discharge, this Outfall will remain unchanged in the permit.

Coal pile runoff pond (Outfall 002 or 003) – the runoff pond has ash in the pond; I asked CEC if they could clean out the runoff pond during the closure process for the coal pile. The coal pile area is no longer receiving coal; the majority of the coal has been removed but not closed or capped yet. The overflow point for the runoff pond to outfall 003 has storm water filter fabric and silt fence which covers the pipe before discharge. Normal operation has been if the runoff pond looks as if it will overflow, the water is pumped to either the metals pond or to the oil retention basin prior to discharge to Outfall 002.

Intake lines with Outfalls 004, 005, 007, 008, 009, 019, and 020 – the intake lines from the river are being filled and the structures are no longer in operation. Intakes 1 and 2 are permanently closed and currently working on the closure of the other two. Outfalls 004 and 005 were for screen backwash units, no longer performing screen backwash and the outfalls are closed. Outfalls 007, 008, and 009 were river recirculation pits which are no longer in use and are closed. Outfalls 019 and 020 were for fish return lines which are no longer in use and are closed.

Chorine tank area and building with Outfall 031 – no longer in use (does not work without the intake structures) and will be removed during the modification of the permit. There is about 100 gallons left from what is in the pipes and left in the bottom of the tank. The Outfall is locked at the pipe, plug in the drain at the building and no longer able to discharge.

No change for Outfalls 016 or 017

Curb and burn use facility (close to outfall 017) - CEC plans to remove the facility which includes the silo used for operation and storage and the truck loading area, no time frame set yet.

Truck washes and silos area with Outfall 010 – The silos have been cleaned out and are no longer in use. These will be dismantled prior to the next reissuance of the permit but will remain in the permit modification language for this outfall. Decommissioning activities are occurring in this area and this language will be added to the permit for this modification. Truck washes still occur but not as much as during what used to occur during normal operations. The sump system (see description for Unit 1- 3 sumps below) for the collection of these wastewaters is collected and discharged to Outfall 002 but the storm water runoff discharges through Outfall 010. The word "minimal" will be added to the language regarding truck washes for this modification. This activity will mostly likely be removed with the reissuance of the permit in 2017.

Sewage Treatment system with Outfall 206 – The Sewage Treatment system is no longer in operation, there is no electricity for the system and it is closed. This outfall will be removed from the permit for this modification.

Unit 1-3 sumps with Outfall 002 – The reference to these sumps will remain in permit, prior to this meeting it was my understanding that these were no longer in operation. Therefore, this language will be added back into the permit description for Outfall 002. These sumps transport low volume wastewaters throughout the facility to the outfall, there are ongoing decommissioning activities, such as equipment, truck and ash silo washings which still require the use of these sumps and lines. These sumps transport flow to the oil retention basin prior to the sedimentation basin and out the Outfall 002.

Unit 4 sump with Outfall 002 – This sump has been closed and pumps removed due to proximity to decommissioning activities. The flow still comes to the Unit 4 but then is diverted through above ground pipe to Units 1-3 by the old administrative building. This does not change the flow diagram and therefore no upgrade to the map was requested by DEQ.

Blue and White building or the Combustion Turbine buildings with Outfall 003 – no change in discharge, storm water from the building and gravel area.

Metals Treatment Basin with Outfall 201 – The basin still in operation and therefore there will be no changes for the modification of the permit.

Discharge canal with Outfall 001 and 101 – The discharge canal is no longer in use activities associated with outfall 001 no longer occur at CEC (once through condenser cooling water, hotwell dumps, internal outfall 101 discharges - demineralizer regeneration wastewaters, reverse osmosis system). These outfalls will be removed from the permit for this modification.

We drove past the landfill structure and looked at the oil retention basin, sedimentation basin and the ash pond.

Landfill structure runoff ditches and leachate are directed to bottom ash pond and can be directed to the sedimentation basin.

The oil retention basin did have water in the basin. Discharges to this basin include Units 1-4, coal pile runoff, and decommissioning activities. This basin gravity feeds to the sedimentation basin. The metals treatment basin has an individual pipe at the same location the oil retention basin gravity feeds to the sedimentation basin.. The metal treatment basin is a valved discharge.

The sedimentation basin was dry. The north side of the basin is pre-cleaned and CEC is currently trying to make it level at a depth of 9 feet. Next to move to the south side and begin pre-cleaning. Outfall 002 has had no discharge for sometime

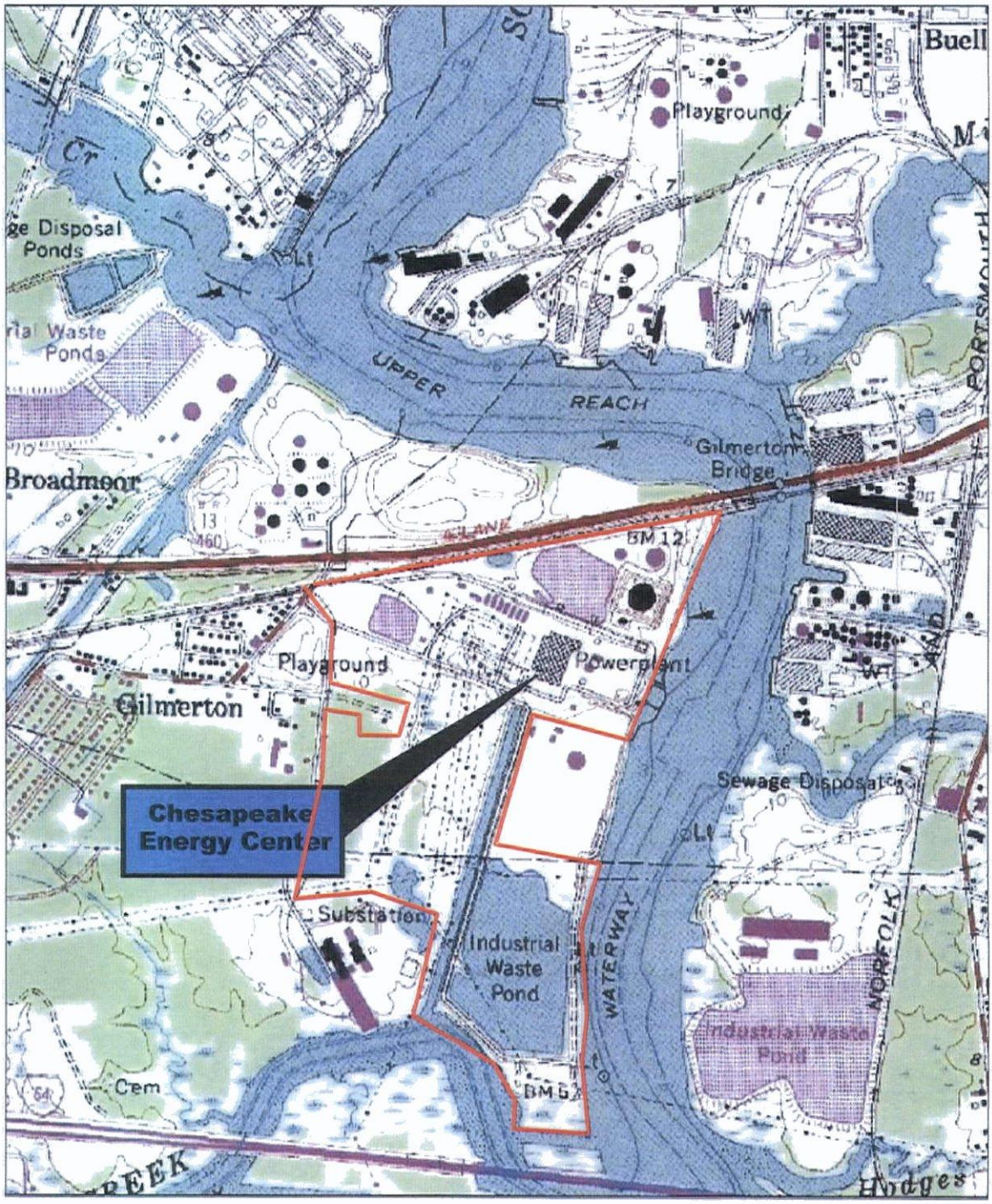
Bottom Ash Pond was used to collect ash sluice, watery ash from the process, and allow the sluice to dry out and then take the remaining dry ash to the landfill. Currently no ash sluice is produced; this is now used as a staging/drying area for the pre-cleaning of the sedimentation basin, stormwater runoff, and leachate. If there is any staging/drying then one the material is dry it is sent to the landfill. The upgraded leachate collection system will be more in line with the CCR rule.

CEC plans to cease operations at the ash pond and landfill prior to October 2015.

ATTACHMENT 2

DISCHARGE LOCATION/TOPOGRAPHIC MAP

DRAFT



ENSR | AECOM

ENSR CORPORATION
4701 COX ROAD, SUITE 200
GLEN ALLEN, VA 23060
PHONE: (804) 290-2493
FAX: (804) 290-7921
WEB: HTTP://WWW.ENSR.AECOM.COM

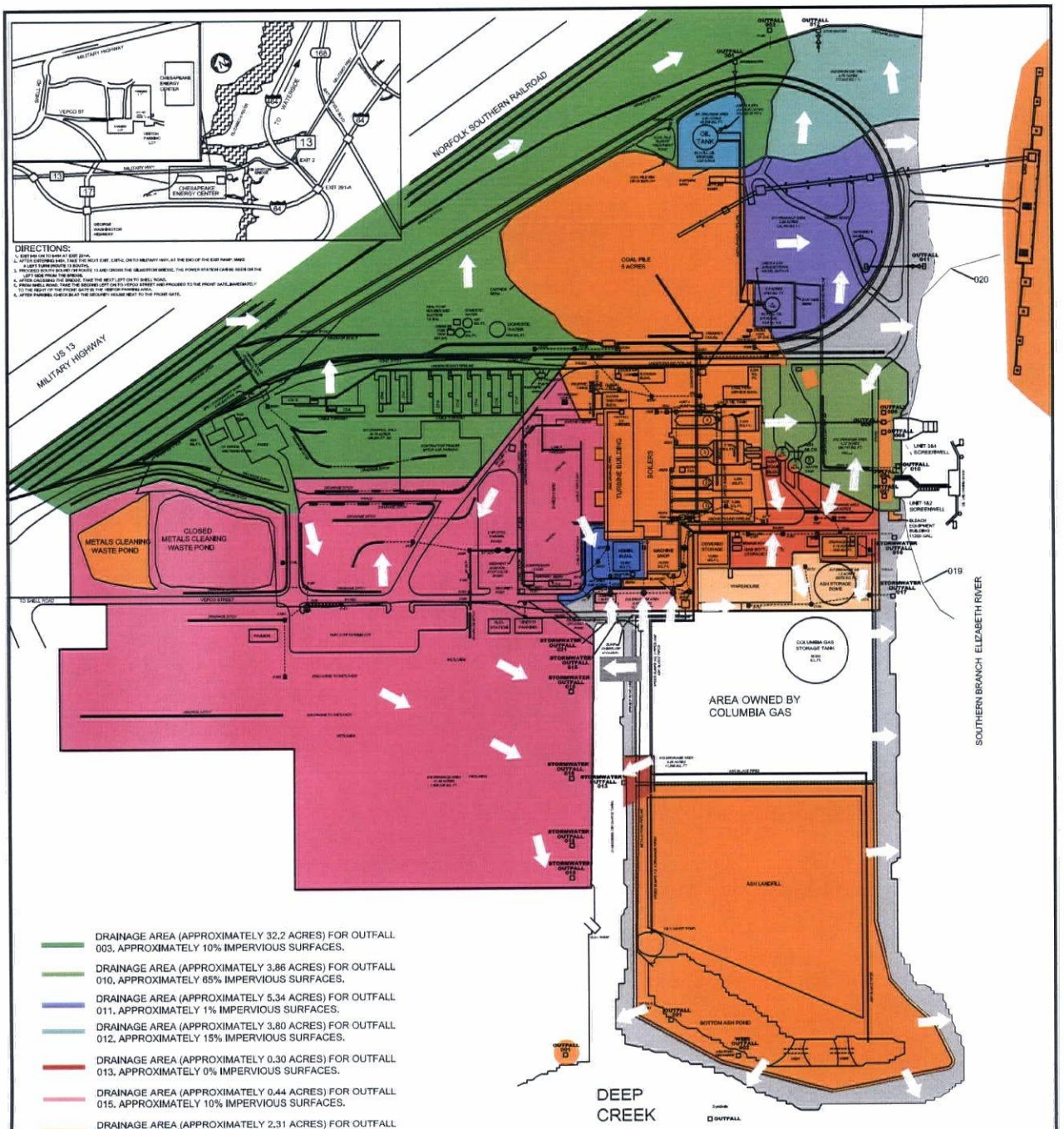
QUADRANGLE:
NORFOLK SOUTH

NOT TO SCALE

SITE LOCATION MAP
CHESAPEAKE ENERGY CENTER
CHESAPEAKE, VIRGINIA

FIGURE NUMBER: 1

DRAWN BY:	DATE:	PROJECT NUMBER:	DRAWING NUMBER:
LLM	6/15/07	02285-038	1 of 1



SHEET NUMBER	FIGURE NUMBER
1 OF 1	3

Site Drainage Map

Chesapeake Energy Center

SCALE:	DATE:	PROJECT NUMBER:
Not to Scale	07/16/07	02285-038-0002

ENSR | AECOM

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DESIGNED BY:	REVISIONS			
JF	NO.:	DESCRIPTION:	DATE:	BY:
DRAWN BY:				
KLP				
CHECKED BY:				
JF				
APPROVED BY:				
RH				

AERIAL IMAGE TAKEN FROM
AERIAL SURVEY BY McKENZIE SNYDER, INC.
IMAGERY DATE:JULY 10, 2015.

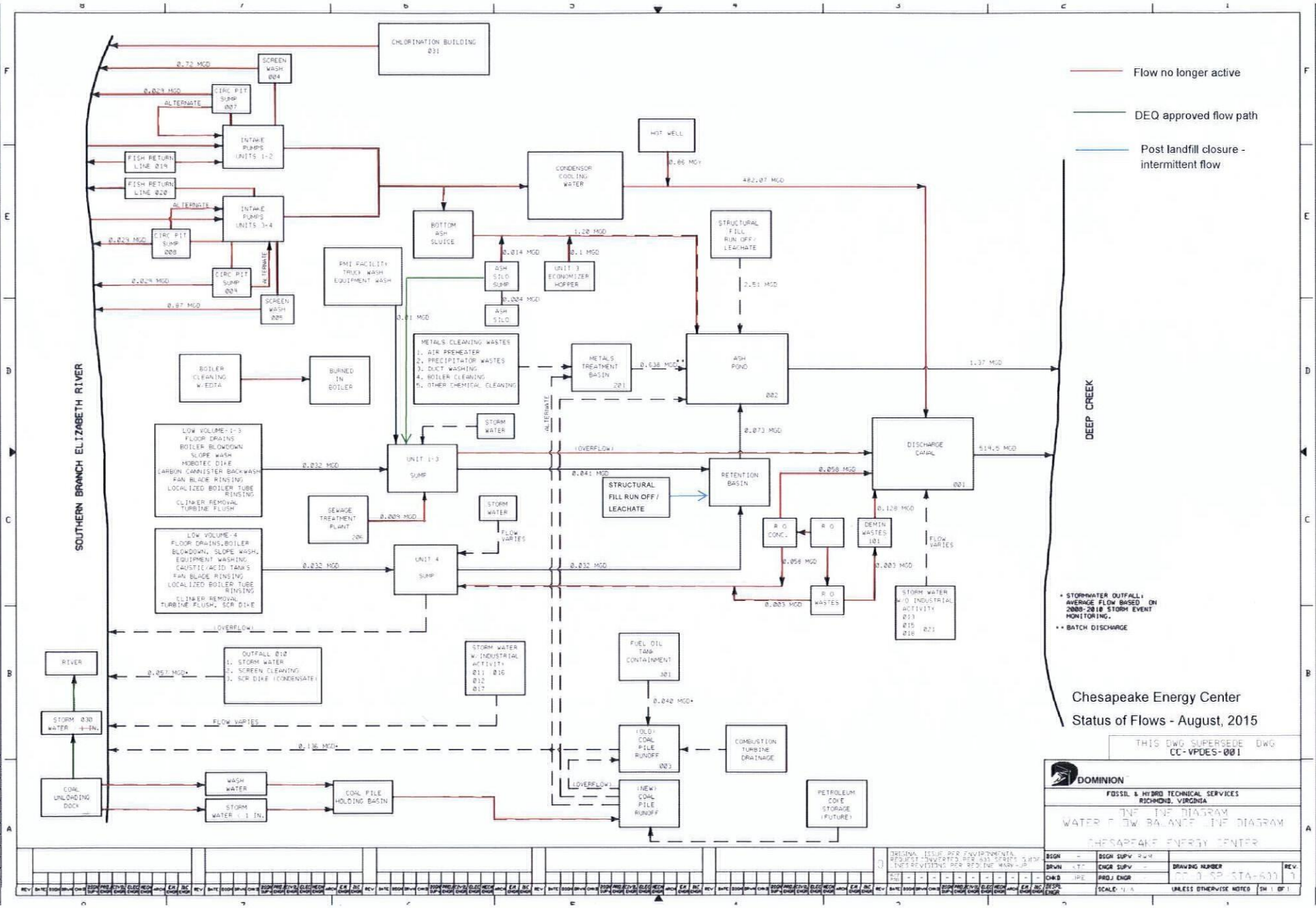
500 0 500
SCALE FEET

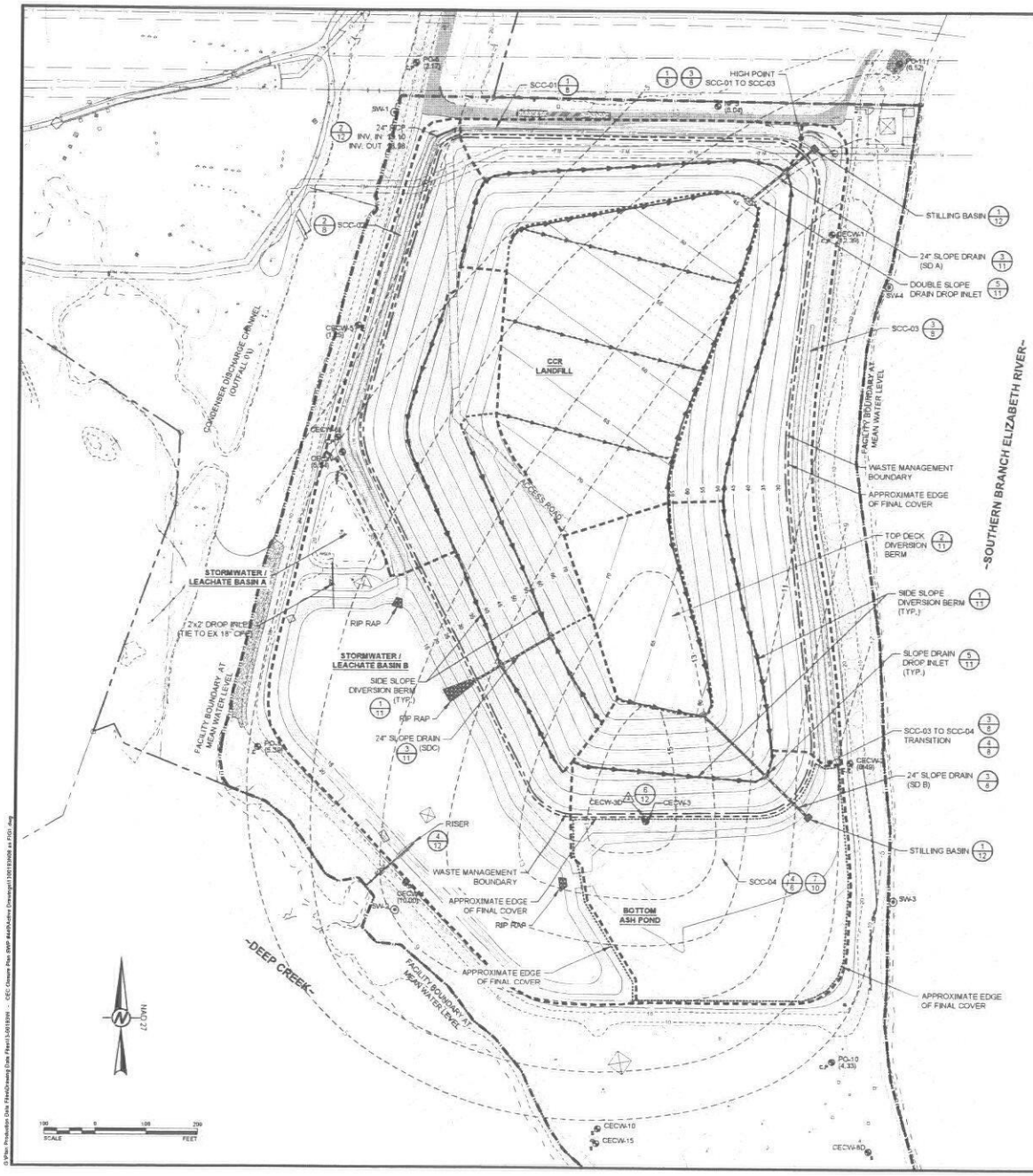
Golder Associates Richmond, Virginia	DATE 01/27/16	TITLE	SITE LOCATION MAP VPDES PERMIT #VA0004081
	DESIGN DPM		
	CADD DPM		
PROJECT No. 130-0193H	CHECK		
SCALE AS SHOWN / REV. 0	REVIEW	CHESAPEAKE ENERGY CENTER	FIGURE 2

ATTACHMENT 3

SCHEMATIC/PLANS & SPECS/SITE MAP/ WATER BALANCE

DRAFT


Flow no longer active
DEQ approved flow path
Post landfill closure - intermittent flow
SOUTHERN BRANCH ELIZABETH RIVER
DEEP CREEK
CHLORINATION BUILDING 031
SCREEN WASH 004
0.72 MGD
0.029 MGD
CIRC PIT SUMP 007
ALTERNATE
INTAKE PUMPS UNITS 1-2
FISH RETURN LINE 019
FISH RETURN LINE 020
INTAKE PUMPS UNITS 3-4
CIRC PIT SUMP 008
CIRC PIT SUMP 009
SCREEN WASH 005
0.87 MGD
HOT WELL
0.06 MGY
CONDENSOR COOLING WATER
482.07 MGD
BOTTOM ASH SLUICE
1.22 MGD
0.014 MGD
0.1 MGD
ASH SILO SUMP
UNIT 3 ECONOMIZER HOPPER
0.004 MGD
ASH SILO
STRUCTURAL FILL RUN OFF/ LEACHATE
2.51 MGD
PMI FACILITY TRUCK WASH EQUIPMENT WASH
0.01 MGD
METALS CLEANING WASTES
1. AIR PREHEATER
2. PRECIPITATOR WASTES
3. DUCT WASHING
4. BOILER CLEANING
5. OTHER CHEMICAL CLEANING
METALS TREATMENT BASIN 201
0.638 MGD**
ASH POND 002
1.37 MGD
BOILER CLEANING W/EDTA
BURNED IN BOILER
STORM WATER
LOW VOLUME-1-3
FLOOR DRAINS
BOILER BLOWDOWN
SLOPE WASH
MOBOTEC DIKE
CARBON CANNISTER BACKWASH
FAN BLADE RINSING
LOCALIZED BOILER TUBE RINSING
CLINKER REMOVAL
TURBINE FLUSH
0.032 MGD
UNIT 1-3 SUMP
(OVERFLOW)
0.041 MGD
0.073 MGD
DISCHARGE CANAL 001
514.5 MGD
RETENTION BASIN
0.058 MGD
STRUCTURAL FILL RUN OFF / LEACHATE
SEWAGE TREATMENT PLANT 206
0.009 MGD
STORM WATER
FLOW VARIES
R O CONC.
R O
DEMIN WASTES 101
0.128 MGD
0.058 MGD
0.203 MGD
LOW VOLUME-4
FLOOR DRAINS,BOILER BLOWDOWN, SLOPE WASH, EQUIPMENT WASHING, CAUSTIC/ACID TANKS
FAN BLADE RINSING
LOCALIZED BOILER TUBE RINSING
CLINKER REMOVAL
TURBINE FLUSH, SCR DIKE
0.032 MGD
UNIT 4 SUMP
0.032 MGD
0.003 MGD
R O WASTES
STORM WATER W/O INDUSTRIAL ACTIVITY 013 015 018 021
* STORMWATER OUTFALL: AVERAGE FLOW BASED ON 2008-2010 STORM EVENT MONITORING.
** BATCH DISCHARGE
(OVERFLOW)
RIVER
0.057 MGD*
OUTFALL 012
1. STORM WATER
2. SCREEN CLEANING
3. SCR DIKE (CONDENSATE)
STORM WATER W/INDUSTRIAL ACTIVITY 011 016 012 017
FUEL OIL TANK CONTAINMENT 301
0.042 MGD*
STORM 030 WATER 1 IN.
FLOW VARIES
0.136 MGD*
(OLD) COAL PILE RUNOFF 003
COMBUSTION TURBINE DRAINAGE
COAL UNLOADING DOCK
WASH WATER
STORM WATER (1 IN.
COAL PILE HOLDING BASIN
(OVERFLOW)
(NEW) COAL PILE RUNOFF
PETROLEUM COKE STORAGE (FUTURE)
Chesapeake Energy Center
Status of Flows - August, 2015
THIS DWG SUPERSEDE DWG CC-VPDES-001
DOMINION
FOSSIL & HYDRO TECHNICAL SERVICES
RICHMOND, VIRGINIA
INF INF DIAGRAM
WATER BALANCE INF DIAGRAM
CHESAPEAKE ENERGY CENTER
DRAWING NUMBER
SCALE: N.A.
UNLESS OTHERWISE NOTED



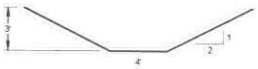
LEGEND:

- FACILITY BOUNDARY
- WASTE MANAGEMENT BOUNDARY
- PROPERTY BOUNDARY
- EXISTING MAJOR CONTOUR (5' INTERVAL)
- EXISTING MAJOR CONTOUR (1' INTERVAL)
- OVERHEAD UTILITY LINE
- EDGE OF WATER
- EXISTING FENCE
- ASPHALT ROAD
- GRAVEL ROAD
- POWER POLE
- MANHOLE
- MISCELLANEOUS POINT
- EXISTING 12" VEGETATIVE COVER
- GROUNDWATER CONTOUR (REFERENCE NOTE 3)
- CECW-2 (6.49) GROUNDWATER MONITORING WELL (REFERENCE NOTE 3)
  - DENOTES COMPLIANCE WELLS
  - DENOTES PERFORMANCE WELLS
  - DENOTES SENTINEL WELLS
- SW-4 SURFACE WATER MONITORING LOCATION
- MAJOR DRAINAGE AREA

REFERENCE:

1. EXISTING TOPOGRAPHY SHOWN IN THIS DRAWING SET IS PREPARED BY PHOTOGRAMMETRIC METHODS BASED ON AERIAL PHOTOGRAPHY PREPARED BY MCKENZIE & SNYDER INC., FOR H&S SURVEYING, DATED JULY 10, 2015, AND ALSO FROM GROUND CONTROL SURVEY PREPARED BY D&M SURVEYORS, AUG. 28, 2013.
2. BORING LOCATIONS AND INFORMATION TAKEN FROM "CHESAPEAKE ENERGY CENTER ASH LANDFILL" VDEQ PERMIT NO. 440, PREPARED BY RESOURCE INTERNATIONAL, LTD, DATED FEBRUARY 29, 2000.
3. APPROXIMATE GROUNDWATER PROFILE TAKEN FROM "2007 POTENTIOMETRIC SURFACE MAP" PREPARED BY URS CORPORATION DATED JANUARY 2008.

1/8 SCC-01
NOT TO SCALE



2/8 SCC-02
NOT TO SCALE

3/8 SCC-03
NOT TO SCALE

4/8 SCC-04
NOT TO SCALE

Golder Associates

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
3	8/12/2014	DPM	RESPONSE TO REQ COMMENTS	ASM	DPM	JRD
2	11/25/13	DPM	RESPONSE TO REQ COMMENTS	ASM	DPM	JRD
1	12/17/14	DPM	REVISED FINAL GRADES	ATN	DPM	JRD

PROJECT

DOMINION
CHESAPEAKE ENERGY CENTER
VPDES PERMIT #VA0004081
CITY OF CHESAPEAKE, VIRGINIA

TITLE

STORMWATER MANAGEMENT AND SITE MONITORING PLAN

PROJECT No.	13-00193	
FILE No.	13001939B6 as FIG1	
REV. 3	SCALE	AS SHOWN
DESIGN	DPM	2014-02-17
CADD	ATN	2014-02-17
CHECK	ATN	2014-09-06
REVIEW	DPM	2014-09-06

FIGURE 1

ATTACHMENT 4

TABLE I - DISCHARGE/OUTFALL DESCRIPTION

DRAFT

TABLE I

NUMBER AND DESCRIPTION OF OUTFALLS

OUTFALL NO.	DISCHARGE LOCATION	DISCHARGE SOURCE (1)	TREATMENT (2)	FLOW (3)
002	36°45′45″ 76°18′15″	Stormwater runoff; ash pond; metal treatment basin (201); coal pile runoff; equipment washing; low volume wastes Units 1-4 sumps; structural fill runoff/leachate; decommissioning activities; Stormwater/Leachate Basins A and B	Sedimentation, Skimming, neutralization and discharge to surface waters	1.37 MGD
201	Internal Outfall to 002	Metals treatment basin Stormwater/Leachate Basin A	Mixing, neutralization, chemical precipitation	Batch Discharge
207	Internal Outfall to 002	Dewatering activities Stormwater/Leachate B	Mixing and sedimentation; additional technology to be determined	0.094 MGD
003	36°46′30′ 76°18′0″	Coal pile runoff; bermed closed fuel oil storage areas runoff (301); dock stormwater; wash water over flow; combustion turbine area runoff	Sedimentation, neutralization and discharge to surface waters	0.136 MGD
301	Internal Outfall to 003	Stormwater from bermed closed oil storage tank area	Sedimentation and contained until the valve in the discharge line is open	0.040 MGD
010	36°46′15″ 76°18′0″	Stormwater from old ash silo area, truck washes, decommissioning activities	Sedimentation, sand filtration and discharge to surface waters	0.057

DRAFT

OUTFALL NO.	DISCHARGE LOCATION	DISCHARGE SOURCE (1)	TREATMENT (2)	FLOW (3)
011	36°46′30″ 76°17′30″	Stormwater runoff from industrial activity areas including loop track area and bermed south tank fuel oil storage area	Runoff is contained in a diked area until the valve in the discharge line is opened at the end of pipe	
012	36°46′30″ 76°18′0″	Stormwater runoff from industrial activity areas including loop track area and bermed south tank fuel oil storage area	Runoff is contained in a diked area until the valve in the discharge line is opened at the end of pipe	
013	36°46′0″ 76°18′15″	Stormwater only	No treatment	No monitoring
015	36°46′15″ 76°18′15″	Stormwater only	No treatment	No monitoring
016	36°46′15″ 76°18′0″	Stormwater runoff from industrial areas	Rock or straw bale filters are maintained around selected drains, replaced as needed	
017	36°45′57″ 76°18′0″	Stormwater runoff from industrial areas	Rock or straw bale filters are maintained around selected drains, replaced as needed	
018	36°46′0″ 76°18′15″	Stormwater only	No treatment	No monitoring
021	36°46′15″ 76°18′15″	Stormwater only	No treatment	No monitoring
030	36°45′45″ 76°18′15″	Stormwater only	No treatment	No monitoring

(1) List operations contributing to flow
(2) Give brief description, unit by unit
(3) Give maximum 30-day average flow for industry and design flow for municipal

DRAFT

ATTACHMENT 5

TABLE II - EFFLUENT MONITORING/LIMITATIONS

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TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING

OUTFALL #002
Outfall Description: Stormwater associated with industrial activities; metals treatment basin (internal outfall 201); dewatering activities discharge (internal outfall 207); coal pile runoff; equipment washing; low volume wastes Units 1-4 sumps; structural fill run off/leachate; stormwater from decommissioning activities
SIC CODE: 4911

(x) Final Limits ( ) Interim Limits Effective Dates - From: Modification To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NL	NA	NL	1/Month	Est
pH (S.U.)	2		NA	6.0	9.0	1/Month	Grab
TSS (mg/l)[a][c]	1		30[d]	NA	50[d]	1/Month	Grab
Oil & Grease (mg/l) [a]	1		15	NA	20[d]	1/Month	Grab
Total Phosphorus (mg/l) [a][c]	3		2.0	NA	NL	1/Year	Grab
Nitrite + Nitrate (mg/l)	3		NA	NA	NL	1/Year	Grab
Total Kjeldahl Nitrogen (TKN) (mg/l)	3		NA	NA	NL	1/Year	Grab
Total Nitrogen (TN) (mg/l)[a][b][c]	3		NA	NA	NL	1/Year	Calc
Dissolved Aluminum	3		NA	NA	NL	1/Quarter	Grab
Dissolved Antimony	3		NA	NA	NL	1/Quarter	Grab
Dissolved Arsenic	3		NA	NA	NL	1/Quarter	Grab
Dissolved Barium	3		NA	NA	NL	1/Quarter	Grab
Dissolved Beryllium	3		NA	NA	NL	1/Quarter	Grab
Dissolved Boron	3		NA	NA	NL	1/Quarter	Grab
Dissolved Cadmium	3		NA	NA	NL	1/Quarter	Grab
Dissolved Chromium VI	3		NA	NA	NL	1/Quarter	Grab
Dissolved Cobalt	3		NA	NA	NL	1/Quarter	Grab
Dissolved Copper	3		NA	NA	NL	1/Quarter	Grab
Dissolved Iron	3		NA	NA	NL	1/Quarter	Grab
Dissolved Lead	3		NA	NA	NL	1/Quarter	Grab
Dissolved Mercury	3		NA	NA	NL	1/Quarter	Grab
Dissolved Molybdenum	3		NA	NA	NL	1/Quarter	Grab

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Dissolved Nickel	3		NA	NA	NL	1/Quarter	Grab
Total Recoverable Selenium	3		NA	NA	NL	1/Quarter	Grab
Dissolved Silver	3		NA	NA	NL	1/Quarter	Grab
Dissolved Thallium	3		NA	NA	NL	1/Quarter	Grab
Dissolved Vanadium	3		NA	NA	NL	1/Quarter	Grab
Dissolved Zinc (ug/l)[a]	3		NL	NA	NL	1/Month	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY

1/Year = Between January 1 and December 31.
1/Quarter = one sample taken every calendar quarter, in accordance with the following schedule: 1st Quarter (January 1 - March 31, to be reported on the Discharge Monitoring Report (DMR) due no later than April 10th); 2nd Quarter (April 1 - June 30, to be reported on the DMR due no later than July 10th); 3rd Quarter (July 1 - September 30, to be reported on the DMR due no later than October 10th); 4th Quarter (October 1 - December 31, to be reported on the DMR due no later than January 10th).

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] See Parts I.B.4. and I.B.5. for quantification levels and reporting requirements, respectively.
[b] TN, which is the sum of TKN and Nitrite + Nitrate, shall be derived from the results of those tests. TSS and Total Phosphorus monitoring is required for the entire permit term at the frequency listed above.
[c] See Part I.B.9. for additional information, calculations, reporting, and other requirements pertaining to TN, TP and TSS. TSS monitoring is required for the entire permit term at the frequency listed above.
[d] Limitation expressed in two significant figures.

The basis for the limitations codes are:

1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Professional Judgment

TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING (continued)

OUTFALL #201 (internal to Outfall 002)
Outfall Description: Metals Treatment Basin
SIC CODE: 4911

(x) Final Limits ( ) Interim Limits Effective Dates - From: Modification To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NL	NA	NL	1/Month	Estimate
TSS (mg/l)[a]	1		30[b]	NA	100[c]	1/Month	Grab
Oil & Grease (mg/l)	1		15	NA	20[b]	1/Month	Grab
Total Recoverable Copper (mg/l)[a]	1		1.0	NA	1.0	1/Month	Grab
Total Recoverable Iron (mg/l)[a]	1		1.0	NA	1.0	1/Month	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] See Parts I.B.4. and I.B.5. for quantification levels and reporting requirements, respectively.
[b] Limitation expressed in two significant figures.
[c] Limitation expressed in three significant figures.

The basis for the limitations codes are:

1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Professional Judgment

DRAFT

TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING

OUTFALL #207
Outfall Description: Interim treatment systems for treatment of dewatering wastewaters. Any process wastewater removed from the Bottom Ash Pond or Industrial Landfill Facility for discharge purposes is considered to be process wastewater from dewatering activities.

SIC CODE: 4911

(x) Final Limits ( ) Interim Limits Effective Dates - From: Modification To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NL	NA	0.094	3/W	Measure-ment
pH (S.U.)	2		NA	6.0	9.0	3/W	Grab
TSS (mg/l)[a]	1		30[f]	NA	100[g]	3/W	4H-C
Oil & Grease (mg/l)	1		15	NA	20[f]	3/W	4H-C
Total Recoverable Antimony (ug/l) [c][d]	3		3200[f]	NA	3200[f]	3/W	4H-C
Total Recoverable Arsenic (ug/l)[a][c][d]	3		75	NA	140[f]	3/W	4H-C
Total Recoverable Cadmium (ug/l)[a][c][d]	3		35	NA	64	3/W	4H-C
Dissolved Chromium VI (ug/l)[a][c][d]	3		200[f]	NA	360[f]	3/W	4H-C
Total Recoverable Copper (ug/l)[a][c][d]	3		18	NA	33	3/W	4H-C
Total Recoverable Nickel (ug/l)[a][c][d]	3		33	NA	60[f]	3/W	4H-C
Total Recoverable Selenium (ug/l)[a][c][d]	3		280[f]	NA	520[f]	3/W	4H-C
Total Recoverable Thallium (ug/l)[c][d]	3		2.4	NA	2.4	3/W	4H-C
Total Recoverable Lead (ug/l)[a][c][d]	3		37	NA	68	3/W	4H-C
Total Recoverable Mercury (ug/l)[a][c][d]	3		2.0	NA	3.6	3/W	4H-C

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Total Recoverable Silver (ug/l)[a][c][d]	3		2.1	NA	3.8	3/W	4H-C
Total Recoverable Zinc (ug/l)[a][c][d]	3		98	NA	180[f]	3/W	4H-C
Dissolved Aluminum (ug/l)[e]	3		NL	NA	NL	1/Month	4H-C
Dissolved Barium (ug/l)[e]	3		NL	NA	NL	1/Month	4H-C
Dissolved Beryllium (ug/l)[e]	3		NL	NA	NL	1/Month	4H-C
Dissolved Boron (ug/l)[e]	3		NL	NA	NL	1/Month	4H-C
Dissolved Cobalt (ug/l)[e]	3		NL	NA	NL	1/Month	4H-C
Dissolved Iron (ug/l)[e]	3		NL	NA	NL	1/Month	4H-C
Dissolved Molybdenum (ug/l)[e]	3		NL	NA	NL	1/Month	4H-C
Dissolved Vanadium (ug/l)[e]	3		NL	NA	NL	1/Month	4H-C
Acute Whole Effluent Toxicity Americamysis bahia (NOAEC) [b][d]	3		NA	100	NA	1/Month	24HC
Chronic Whole Effluent Toxicity Americamysis bahia (TU_c) [b][d]	3		NA	NA	1.44	1/Month	24HC
Acute Whole Effluent Toxicity Cyprinodon variegates (NOAEC) [b][d]	3		NA	100	NA	1/Month	24HC
Chronic Whole Effluent Toxicity Cyprinodon variegates (TU_c) [b][d]	3		NA	NA	1.44	1/Month	24HC

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY
1/Month = Once per month
Est. = Estimate, reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

4H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 4 (four)-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of 4 (four) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of 4 (four) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by $\geq$ 10% or more during the monitored discharge.

24HC = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24 (twenty-four)-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of 24 (twenty-four) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum 24 (twenty-four) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by > 10% or more during the monitored discharge.

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] See Parts I.B.4. and I.B.5. for quantification levels and reporting requirements, respectively.
[b] See Part I.C.3. for additional WET monitoring requirements.

[c] Sampling for the parameters identified with a monitoring frequency of "3/W" for Outfall 207 shall occur at least three days per week with a minimum of 48 hours between sampling events. A sampling week extends Sunday through Saturday. The permittee shall receive results for parameters identified with a monitoring frequency of "3/W" within four business days of taking the sample. Results of the weekly sampling shall be reported to DEQ no later than the close of business Friday of the week following sample collection. This reporting requirement does not substitute for Part II. C, concerning the monthly reporting of monitoring results with the Discharge Monitoring Report.
[d] The permittee shall immediately cease the discharge upon notification of an exceedance of an established effluent limit and/or WET limits at Internal Outfall 207. See Part I.B.15 for additional requirements.
[e] The composite period for the parameters identified with a monitoring frequency of "1/M" shall occur within the composite period for the Whole Effluent Toxicity monitoring.
[f] Limitation expressed in two significant figures.
[g] Limitation expressed in three significant figures.

The basis for the limitations codes are:

1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Professional Judgment

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TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING (continued)

OUTFALL #003
Outfall Description: Regulated stormwater from coal pile runoff; bermed closed bulk storage fuel area runoff (301); dock stormwater; wash water overflow; combustion turbine area runoff
SIC CODE: 4911

(x) Final Limits ( ) Interim Limits Effective Dates - From: Modification To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NL	NA	NL	1/6 Months	Estimate
pH (S.U.)	1		NA	6.0	9.0	1/6 Months	Grab
TSS (mg/l) [a] [b] [e]	1		NA	NA	50 [f]	1/6 Months	Grab
TPH (mg/l) [b] [c]	3		NA	NA	NL	1/6 Months	Grab
Dissolved Copper (ug/l) [b]	3		NA	NA	NL	1/6 Months	Grab
Dissolved Zinc (ug/l) [b]	3		NA	NA	NL	1/6 Months	Grab
Dissolved Iron (ug/l)	3		NA	NA	NL	1/6 Months	Grab
Total Phosphorus (mg/l) [b] [e]	3		NA	NA	NL	1/Year	Grab
Nitrite + Nitrate (mg/l)	3		NA	NA	NL	1/Year	Grab
Total Kjeldahl Nitrogen (TKN) (mg/l)	3		NA	NA	NL	1/Year	Grab
Total Nitrogen (mg/l) [b] [d] [e]	3		NA	NA	NL	1/Year	Calc

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY

1/6 Months = In accordance with the following schedule: 1st half (January 1 - June 30); 2nd half (July 1 - December 31).

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] See Part B.10. for overflow of untreated coal pile runoff from a 10-Yer/24-Hour Storm.
[b] See Parts I.B.4. and I.B.5. for quantification levels and reporting requirements, respectively.
[c] TPH is the sum of individual gasoline range organics and diesel range organics or TPH-GRO and TPH-DRO to be measured by EPA SW 846 Method 8015C (2007) for gasoline and diesel range organics, or by EPA SW 846 Methods 8260B (1996) and 8270D (2007). If the combination of Methods 8260B and 8270D is used, the lab must report the total of gasoline range organics, diesel range organics and polynuclear aromatic hydrocarbons.
[d] TN, which is the sum of TKN and Nitrite + Nitrate, shall be derived from the results of those tests.
[e] See Part I.B.9. for additional information, calculations, reporting, and other requirements pertaining to TN, TP and TSS. TSS monitoring is required for the entire permit term at the frequency listed above.
[f] Limitation expressed in two significant figures.

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The basis for the limitations codes are:

1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Professional Judgment

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TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING (continued)

OUTFALL #301
Outfall Description: Bermed closed bulk storage fuel area
SIC CODE: 4911

(x) Final Limits ( ) Interim Limits Effective Dates - From: Modification To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NA	NA	NL	1/6 Months	Estimate
TPH (mg/l) [a] [b]	3		NA	NA	30 [c]	1/6 Months	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY

1/6 Months = In accordance with the following schedule: 1st half (January 1 - June 30); 2nd half (July 1 - December 31).

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] See Parts I.B.4. and I.B.5. for quantification levels and reporting requirements, respectively.
[b] TPH is the sum of individual gasoline range organics and diesel range organics or TPH-GRO and TPH-DRO to be measured by EPA SW 846 Method 8015C (2007) for gasoline and diesel range organics, or by EPA SW 846 Methods 8260B (1996) and 8270D (2007). If the combination of Methods 8260B and 8270D is used, the lab must report the total of gasoline range organics, diesel range organics and polynuclear aromatic hydrocarbons.
[c] Limitation expressed in two significant figures.

The basis for the limitations codes are:
1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Professional Judgment

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TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING (continued)

OUTFALL # 010
Outfall Description: Regulated stormwater runoff from industrial activity areas including old ash silo area, minimal truck washes and decommissioning activities
SIC CODE: 4911

(x) Final Limits ( ) Interim Limits Effective Dates - From: Modification To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NL	NA	NL	1/6 Months	Est.
pH (S.U.)	2		NA	6.0	9.0	1/6 Months	Grab
TSS (mg/l)[a][d]	3		NA	NA	NL	1/6 Months	Grab
TPH (mg/l)[a][b]	3		NA	NA	NL	1/6 Months	Grab
Dissolved Copper (ug/l)[a]	3		NA	NA	NL	1/Year	Grab
Dissolved Arsenic (ug/l)[a]	3		NA	NA	NL	1/Year	Grab
Dissolved Lead (ug/l)[a]	3		NA	NA	NL	1/Year	Grab
Dissolved Zinc (ug/l)[a]	3		NA	NA	NL	1/Quarter	Grab
Total Phosphorus (mg/l)[a][d]	3		NA	NA	NL	1/Year	Grab
Nitrite + Nitrate (mg/l)	3		NA	NA	NL	1/Year	Grab
Total Kjeldahl Nitrogen (TKN) (mg/l)	3		NA	NA	NL	1/Year	Grab
Total Nitrogen (mg/l)[a][c][d]	3		NA	NA	NL	1/Year	Calc

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY

1/6 Months = In accordance with the following schedule: 1st half (January 1 - June 30); 2nd half (July 1 - December 31).
1/Quarter = one sample taken every calendar quarter, in accordance with the following schedule: 1st Quarter (January 1 - March 31, to be reported on the Discharge Monitoring Report (DMR) due no later than April 10th); 2nd Quarter (April 1 - June 30, to be reported on the DMR due no later than July 10th); 3rd Quarter (July 1 - September 30, to be reported on the DMR due no later than October 10th); 4th Quarter (October 1 - December 31, to be reported on the DMR due no later than January 10th)
1/Year = Between January 1 and December 31.

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] See Parts I.B.4. and I.B.5. for quantification levels and reporting requirements, respectively.
[b] TPH is the sum of individual gasoline range organics and diesel range organics or TPH-GRO and TPH-DRO to be measured by EPA SW 846 Method 8015C (2007) for gasoline and diesel range organics, or by EPA SW 846 Methods 8260B (1996) and 8270D (2007). If the combination of Methods 8260B and 8270D is used, the lab must report the total of gasoline range organics, diesel range organics and polynuclear aromatic hydrocarbons.
[c] TN, which is the sum of TKN and Nitrite + Nitrate, shall be derived from the results of those tests.
[d] See Part I.B.9. for additional information, calculations, reporting, and other requirements pertaining to TN, TP and TSS. TSS monitoring is required for the entire permit term at the frequency listed above.

The basis for the limitations codes are:

1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Professional Judgment

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TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING (CONTINUED)

OUTFALL #013, 015, 018, 021, and 030
Outfall Description: Stormwater not associated with a regulated industrial activity
SIC CODE: 4911

(x) Final Limits ( ) Interim Limits Effective Dates - From: Modification To: Expiration

THESE OUTFALLS SHALL ONLY CONTAIN STORMWATER NOT ASSOCIATED WITH A REGULATED INDUSTRIAL ACTIVITY WHERE NO MONITORING IS REQUIRED. THERE SHALL BE NO DISCHARGE OF PROCESS WASTEWATER FROM THESE OUTFALLS.

2. There shall be no discharge of floating solids or visible foam in other than trace amounts.

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TABLE II - STORM WATER EFFLUENT LIMITATIONS/MONITORING

OUTFALL #011 and 012
Outfall Description: Regulated stormwater runoff from industrial activity areas including the loop track and bermed south tank fuel oil storage area
SIC CODE: 4911

PARAMETER & UNITS	STORM CATEGORY 1-29 or PJ	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS [a]	
		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE [b]
Flow (MG)	14	NA	NL	1/6 Months	Est. [c]
pH (S.U.)	14	NL	NL	1/6 Months	Grab
TSS (mg/l) [d] [g]	14	NA	NL	1/6 Months	Grab
TPH (mg/l) [d] [e]	PJ	NA	NL	1/Year	Grab
Dissolved Copper (ug/l) [d]	14	NA	NL	1/Year	Grab
Dissolved Zinc (ug/l) [d]	14	NA	NL	1/Year	Grab
Total Phosphorus (mg/l) [d] [g]	PJ	NA	NL	1/6 Months	Grab
Nitrite + Nitrate (mg/l)	PJ	NA	NL	1/6 Months	Grab
Total Kjeldahl Nitrogen (TKN) (mg/l)	PJ	NA	NL	1/6 Months	Grab
Total Nitrogen (mg/l) [d] [f] [g]	PJ	NA	NL	1/6 Months	Calc

1/6 Months = In accordance with the following schedule: 1st half (January 1 - June 30); 2nd half (July 1 - December 31).
1/Year = Between January 1 and December 31.
PJ = Professional judgment

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] See Part I.D.1. (STORM WATER MANAGEMENT CONDITIONS) for additional storm water sampling and reporting requirements.
[b] The grab sample shall be taken within the first hour but not later than 24 hours of the discharge.
[c] Estimate of the total volume of the discharge during the storm event.
[d] See Parts I.B.4. and I.B.5. for quantification levels and reporting requirements, respectively.
[e] TPH is the sum of individual gasoline range organics and diesel range organics or TPH-GRO and TPH-DRO to be measured by EPA SW 846 Method 8015C (2007) for gasoline and diesel range organics, or by EPA SW 846 Methods 8260B (1996) and 8270D (2007). If the combination of Methods 8260B and 8270D is used, the lab must report the total of gasoline range organics, diesel range organics and polynuclear aromatic hydrocarbons.
[f] TN, which is the sum of TKN and Nitrite + Nitrate, shall be derived from the results of those tests.

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[g] See Part I.B.9. for additional information, calculations, reporting, and other requirements pertaining to TN, TP and TSS. TSS monitoring is required for the entire permit term at the frequency listed above.

The basis for the limitations codes are:

A. Technology (e.g., Federal Effluent Guidelines)
B. Water Quality Standards (9 VAC 25-260 et. seq.)
C. Professional Judgment

OR

*STORM REGS.-- CATEGORIES THAT REQUIRE MONITORING: [PICK AS APPROPRIATE]

(1) Timber Products
(2) Paper & Allied Products
(3) Chemical & Allied Products
(4) Asphalt Paving/Roofing Materials & Lubricant
(5) Glass, Clay, Cement, Concrete & Gypsum Products
(6) Primary Metals
(7) Metal Mining (Ore Mining & Dressing)
(8) Coal Mines & Coal Mining Related
(9) Oil & Gas Extraction & Petroleum Refineries
(10) Hazardous Waste Treatment, Storage, Disposal
(11) Landfills, Land Application Sites & Open Dumps
(12) Automobile Salvage Yards
(13) Scrap/Waste Recycling
(14) Steam Electric Power Generating, Inc. Coal Handling Areas
(15) Motor Freight, Passenger, Rail, U.S. Postal Transportation & Petroleum Bulk Oil Stations and Terminals
(16) Water Transportation With Maintenance and/or Equipment Cleaning
(17) Ship/Boat Building or Repairing
(18) Vehicle Maintenance, Equipment Cleaning or Deicing Areas At Air Transportation Facilities
(19) Treatment Works
(20) Food & Kindred Products
(21) Textile Mills, Apparel & Other Fabric Products Mfg.
(22) Wood & Metal Furniture and Fixture Mfg.
(23) Printing & Publishing
(24) Rubber, Miscellaneous Plastic Products & Miscellaneous Mfg.
(25) Leather Tanning & Finishing
(26) Fabricated Metal Products
(27) Transportation Equipment, Industrial or Commercial Machinery Mfg.
(28) Electronic & Electrical Equipment and Components, Photographic & Optical Goods Mfg.
(29) Nonclassified Facilities

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TABLE II - STORM WATER EFFLUENT LIMITATIONS/MONITORING

OUTFALL #016 and 017
Outfall Description: Regulated stormwater runoff from industrial activity areas (These outfalls are considered substantially identical; outfall 016 may be sampled as a representative outfall for 017; sample results shall be reported for both outfalls.)
SIC CODE: 4911

PARAMETER & UNITS	STORM CATEGORY 1-29 or BPJ	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS [a]	
		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE [b]
Flow (MG)	14	NA	NL	1/3 Months	Est.[c]
pH (S.U.)	14	NL	NL	1/3 Months	Grab
TSS (mg/l)[d][g]	14	NA	NL	1/6 Months	Grab
TPH (mg/l)[d][e]	PJ	NA	NL	1/Year	Grab
Dissolved Copper (ug/l)[d]	14	NA	NL	1/Year	Grab
Dissolved Zinc (ug/l)[d][h]	14	NA	NL	1/3 Months	Grab
Total Phosphorus (mg/l)[d][g]	PJ	NA	NL	1/6 Months	Grab
Nitrite + Nitrate (mg/l)	PJ	NA	NL	1/6 Months	Grab
Total Kjeldahl Nitrogen (mg/l)	PJ	NA	NL	1/6 Months	Grab
Total Nitrogen (mg/l)[d][f][g]	PJ	NA	NL	1/6 Months	Calc

1/3 Months = In accordance with the following schedule: 1st quarter (January 1 - March 31); 2nd quarter (April 1 - June 30); 3rd quarter (July 1 - September 30); 4th quarter (October 1 - December 31).
1/6 Months = In accordance with the following schedule: 1st half (January 1 - June 30); 2nd half (July 1 - December 31).
1/Year = Between January 1 and December 31.
PJ = Professional judgment

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] See Part I.D.1. (STORM WATER MANAGEMENT CONDITIONS) for additional storm water sampling and reporting requirements.
[b] The grab sample shall be taken within the first hour but not later than 24 hours of the discharge.
[c] Estimate of the total volume of the discharge during the storm event.
[d] See Parts I.B.4. and I.B.5. for quantification levels and reporting requirements, respectively.
[e] TPH is the sum of individual gasoline range organics and diesel range organics or TPH-GRO and TPH-DRO to be measured by EPA SW 846 Method 8015C (2007) for gasoline and diesel range organics, or by EPA SW 846 Methods

8260B (1996) and 8270D (2007). If the combination of Methods 8260B and 8270D is used, the lab must report the total of gasoline range organics, diesel range organics and polynuclear aromatic hydrocarbons.
[f] TN, which is the sum of TKN and Nitrite + Nitrate, shall be derived from the results of those tests.
[g] See Part I.B.9. for additional information, calculations, reporting, and other requirements pertaining to TN, TP and TSS. TSS monitoring is required for the entire permit term at the frequency listed above.
[h] See Part I.D. for Storm Water Evaluation requirements.

The basis for the limitations codes are:

A. Technology (e.g., Federal Effluent Guidelines)
B. Water Quality Standards (9 VAC 25-260 et. seq.)
C. Professional Judgment

OR

*STORM REGS.-- CATEGORIES THAT REQUIRE MONITORING: [PICK AS APPROPRIATE]

(1) Timber Products
(2) Paper & Allied Products
(5) Chemical & Allied Products
(6) Asphalt Paving/Roofing Materials & Lubricant
(6) Glass, Clay, Cement, Concrete & Gypsum Products
(6) Primary Metals
(8) Metal Mining (Ore Mining & Dressing)
(8) Coal Mines & Coal Mining Related
(9) Oil & Gas Extraction & Petroleum Refineries
(10) Hazardous Waste Treatment, Storage, Disposal
(11) Landfills, Land Application Sites & Open Dumps
(12) Automobile Salvage Yards
(13) Scrap/Waste Recycling
(14) Steam Electric Power Generating, Inc. Coal Handling Areas
(15) Motor Freight, Passenger, Rail, U.S. Postal Transportation & Petroleum Bulk Oil Stations and Terminals
(16) Water Transportation With Maintenance and/or Equipment Cleaning
(17) Ship/Boat Building or Repairing
(18) Vehicle Maintenance, Equipment Cleaning or Deicing Areas At Air Transportation Facilities
(19) Treatment Works
(20) Food & Kindred Products
(21) Textile Mills, Apparel & Other Fabric Products Mfg.
(22) Wood & Metal Furniture and Fixture Mfg.
(23) Printing & Publishing
(24) Rubber, Miscellaneous Plastic Products & Miscellaneous Mfg.
(25) Leather Tanning & Finishing
(26) Fabricated Metal Products
(27) Transportation Equipment, Industrial or Commercial Machinery Mfg.
(28) Electronic & Electrical Equipment and Components, Photographic & Optical Goods Mfg.
(29) Nonclassified Facilities

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ATTACHMENT 6

EFFLUENT LIMITATIONS/MONITORING RATIONALE/SUITABLE DATA/ ANTIDEGRADATION/ANTIBACKSLIDING

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ATTACHMENT 6
EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS
RATIONALE AND SUITABLE DATA

VPDES Permit No. VA0004081 remains a major industrial discharger. Dominion has requested a major modification of the permit due to the cessation of cooling water discharges and wastewater discharges associated with operation of an electrical utility facility; and to address discharges of treated wastewater and stormwater associated with decommissioning activities at the closed electrical facility. The facility is located on the shore of the Southern Branch of the Elizabeth River and Deep Creek in Chesapeake, Virginia. The facility previously operated 24 hours per day, 365 days per year.

The activity at the facility still remains SIC 4911, Electric Power which is categorized in the Federal Effluent Guidelines (FEG), 40 CFR Part 423-Steam Electric Power Generating Point Source Category, enclosed. Based on the applicable guidelines, the required limitations for this categorical industry's process wastewaters were placed on internal outfalls 101 and 201 and outfalls 002 and 003. Although the facility remains categorized at this point as SIC 4911, the activities at outfall 101 no longer exist and therefore the FEGs no longer apply to this outfall and this outfall will be removed for this permit reissuance. All other outfalls with applicable FEGs will remain in the permit for this modification.

Certain outfalls associated with the permit are no longer discharging and will no longer be included in the permit, those outfalls are: 001, 101, 206, 004, 005, 007, 008, 009, 019, 020, 031. See further descriptions and rationale in the section below concerning backsliding.

EFFLUENT LIMITATIONS RATIONALE

A reasonable potential analysis was conducted to determine if it is statistically probable that pollutant concentrations in the process wastewaters may exist at levels potentially harmful to human health or to the aquatic life when discharged to the receiving waters. Where a reasonable potential exists for a particular pollutant parameter, numeric effluent limits are established in the permit as a control measure.

The first step in the reasonable potential analysis is to identify surface water quality criteria that are protective of human health and aquatic life beneficial uses. Such criteria are established in the "Virginia Water Quality Standards" regulation (9VAC25-260 *et seq.*).

9VAC25-260-20.B of the Virginia Water Quality Standards regulations authorizes the use of mixing zone concepts in evaluating effluent limitations for VPDES permits. It is DEQ staff's professional judgment the application of mixing zone concepts and dilution factors are appropriate at this facility and for this discharge location given: a) the proximity to the mouth of the Chesapeake Bay and the associated strong tidal action that occurs near the Bay's mouth; b) the range in low and high tide elevations that results in a significant exchange of water volumes with each tidal cycle; and c) the low ratio of process wastewater discharge volume/flows relative to the large volume and open-water nature of the receiving waters.

For tidal waters, consistent with existing agency guidance (GM 02-2011), default mixing ratios of 50:1 for chronic and human health criteria and 2:1 for acute criteria were used to calculate the waste load allocations (WLAs) at each of the discharge outfalls, with the exception of Outfall 207. At Outfall 207, due to the unique and sensitive nature of the effluent discharge (concentration) at that outfall, a more stringent and conservative mixing ratio of 5:1 was used to establish WLAs for chronic and human health criteria, based on staff Professional Judgment (PJ).

The calculated WLAs for each pollutant parameter are then entered into a statistical program (STATS), along with the results of effluent monitoring to determine whether or not there is a reasonable potential for the discharge to exceed the WLA. If the 97th percentile of the effluent distribution exceeds the corresponding WLA, then the discharge

is considered to have demonstrated reasonable potential to adversely impact water quality and an effluent limitation is established. These procedures are consistent with the methodologies established in EPA's Technical Support Document for Water Quality-based Toxics Control (March 1991). This statistical evaluation is used by DEQ to control the discharge of toxic parameters in all individual VPDES permits. Again, due to the unique and sensitive nature of the coal ash dewatering discharge from Outfall 207, a more conservative approach has been used. The applicable WLA determinations and statistical results are contained in this attachment of this fact sheet.

NUTRIENT MONITORING, 9 VAC 25-820 AND GUIDANCE MEMORANDOM 14-2011

The Virginia Chesapeake Bay TMDL Phase 1 Watershed Implementation Plan (WIP 1) was finalized and EPA approved on November 29, 2010. The December 2010 Chesapeake Bay TMDL includes individual WLAs for all "significant" dischargers in the Bay watershed (with the exception of aggregate Chlorophyll-a based WLAs in the James River Basin). "Significant" dischargers in the Virginia portion of the Bay watershed are defined under the Nutrient Trading Watershed General Permit Regulation (9 VAC 25-820). All dischargers that did not meet the definition were considered nonsignificant dischargers and were included in the aggregate WLAs in the TMDL. Numeric WLAs are included in the watershed general permit for all significant dischargers and new or expanding nonsignificant dischargers that meet the criteria are included in Part I.G. of the general permit.

This facility is considered a non-significant discharger. Nutrient parameter monitoring for total nitrogen (TN), total phosphorus, TKN, nitrate + nitrite, and TSS have been added to all remaining outfalls where monitoring is required per Guidance Memorandum 14-2010, Nutrient Monitoring for "Nonsignificant" Discharges to the Chesapeake Bay Watershed. These outfalls include: 002, 003, 010, 011, 012, 016, and 017. Outfalls 002, 003, and 010 include process industrial discharges; therefore sampling frequency for these outfalls is 1/Year. All other strictly stormwater discharges are monitored 1/6 months. New nutrient monitoring special conditions have also been added to the permit in order to develop data necessary to reevaluate the Virginia point source WLAs included in the Chesapeake Bay TMDL. The collection of data may overlap into the next reissuance of the permit. After a period of two years the facility will calculate the WLAs and compare the loadings to the current WIP. If the calculated facility loading value for TP, TN, or TSS exceeds the corresponding loading value in the current WIP, then the permittee shall develop a Chesapeake Bay TMDL Action Plan. As the loads for both non-significant industrial and municipals are refined, the WIP may be modified to include more current WLAs.

BACKSLIDING, 9 VAC 25-31-220 L. 1 and 2

1. In the case of effluent limitations established on the basis of §§ 301(b)(1)(C) or 303(d) or (e) of the CWA, a permit may not be renewed, reissued, or modified to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit except in compliance with § 303(d)(4) of the CWA.

2. Backsliding applies to this permit but conforms to the anti-backsliding provisions of Section 402 (o) of the Clean Water Act, 9 VAC 25-31-220 L. of the VPDES Permit regulation and 40 CFR 122.44 (l). Exceptions. A permit with respect to which subdivision 1 of this subsection applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant, if: a. Material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation.

The table below defines the outfalls, parameters and monitoring frequencies where the discharge no longer exists due to cessation of operations.

Outfall	Description	Parameter	Effluent Limitation	Monitoring Frequency
001	Once through condenser cooling water; hotwell dumps; internal outfall 101 discharges	Flow (MGD)	No limit	1/Day
		pH (SU)	6.0 min and 9.0 max	2/Month
		TRC (mg/l)	0.021 monthly avg. and 0.026 max	2/Month
		Total Phosphorus (TP) (mg/l)	2.0 monthly avg.	1/3 Months
		Total Nitrogen (TN) (mg/l)	No limit	1/3 Months
		Temperature (°C)	No limit, thermal mixing zone study special condition	1/Year
		Heat Rejection (BTU/HR)	3.55 x 10(9)	Continuous
101 (FEG 40 CFR Part 423)	Demineralizer regeneration wastewater; reverse osmosis wastewater	Flow (MGD) and Oil and Grease (mg/l)	No limit; 15 min and 20 max	1/3 Months
		Total Suspended Solids (TSS) (mg/l)	30 monthly avg. and 100 max	1/3 Months
206	Sewage Treatment Plant	Flow (MGD)	No limit	1/Month
		TRC (mg/l)	1.5 min	1/Month
		Enterococci	No limit	1/Month
004, 005, 007, 008, 009, 019, 020	Screen backwash units; River recirculation pits; Fish return lines - unaltered waters as they are drawn from the source supply	No parameters	No limits	No monitoring
031	Uncontaminated river water from chlorination building area	Flow (MGD)	No limit	1/Year
		pH (SU)	No limit	1/Year
		TRC (mg/l)	No limit	1/Year

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The following table specifies the outfall, parameters and monitoring limits where backsliding applies due to changes in operations at the facility.

Outfall	Change in Operation	Parameter	Effluent limitation	Monitoring Frequency
002	Removal of sewage treatment plant	TRC (mg/l)	0.026 monthly avge and 0.026 max	1/3 Months to none
	Removal of operation of the selective catalytic reduction system (SBR)	Ammonia (mg/l)	No limit	2/Month to none
	Discontinuation of Boiler/Metals Cleaning	Dissolved Copper (ug/l)	No limit	1/6 Months to none

SPECIFIC OUTFALL CHANGES FOR THIS MAJOR MODIFICATION ARE AS FOLLOWS:

OUTFALL 002

The discharges associated with this outfall have changed and the following discharge sources apply as listed in the description for the Part I.A. page: Stormwater associated with industrial activities; metals treatment basin (201); dewatering activities discharge(internal 207); coal pile runoff; equipment washing; low volume wastes Units 1-4 sumps; structural fill run off/leachate and decommissioning activities.

The monitoring frequency for flow, pH, oil and grease, and total suspended solids shall be 1/month. This is a change from 2/month in the previous issuance of the permit due to the significant changes associated with the discharge and with the possible larger input of leachate with possible reduction of other resources. Monitoring for phosphorus and nitrogen will be 1/Year which is a change from the previous monitoring frequency of 1/3 Months (based on GM 14-2011).

Parameter for ammonia was removed due to the fact that the facility no longer operates selective catalytic reduction (SCR) system.

Parameter for total residual chlorine was removed due to the fact that the operations using this chemical are no longer in use.

Parameter for Dissolved Copper was removed due to the fact that the operations associated with this metal are no longer in process and the removal of the special condition language for Boiler/Metals cleaning requirement has been removed from the permit.

Flow: No limit, however monitoring is required 1/month by an estimate sample based on professional judgment (PJ).

pH: 6.0 min - 9.0 max SU, 1/month by a grab sample. Limit based on water quality criteria states that pH shall be a minimum value of 6.0 S.U. and a maximum value of 9.0 S.U.

Total Phosphorus: 2.0 mg/l monthly average, monitoring daily maximum, 1/Year by a grab sample. Limit is based on PJ referencing the NEW Policy (9VAC 25-40-10 et seq.). Although the newest WQS does not designate these waters to be NEW, anti-backsliding regulations do not allow the relaxation of a limitation if the relaxation of that limit would be based on new regulations. Additionally, Guidance Memo No. 14-2011 requires monitoring for total phosphorus in order to develop data necessary to reevaluate the Virginia point source WLAs included in the Chesapeake Bay TMDL. Monitoring frequency has been reduced from 1/3 Months to 1/Year. Data may be obtained using the requirements already in place.

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Total Nitrogen: No limit, however 1/Year monitoring is required by a grab sample. This parameter was previously added to the permit based on PJ referencing the NEW Policy (9VAC 25-40-10 et seq.). Since there was no limit associated with the parameter, anti-backsliding does not apply and the parameter could be removed. However, the new Guidance Memo No. 14-2011 requires monitoring for total nitrogen in order to develop data necessary to reevaluate the Virginia point source WLAs included in the Chesapeake Bay TMDL. Therefore monitoring for this parameter will remain based on new rationale.

Total Suspended Solids: 30 mg/l monthly average and 50 mg/l maximum, 1/month by a grab sample. Limits based on Federal Effluent Guidelines (FEG) 40 CFR Part 423. The maximum limit is 50 mg/l in order to apply proper limits to the discharge from coal pile runoff, which is required by FEG. Since this is treated runoff, the clause that states

> "Any untreated overflow from facilities designed, constructed and operated to treat the volume of coal pile runoff which results from a 10-year/24-hour rainfall event shall not be subject to the total suspended solids limitation of 50 mg/l maximum concentration at any one time."

Does not apply at outfall 002 since there will be no untreated overflow from the ash pond. Also, this clause cannot apply to coal pile runoff that is combined with other discharges and is treated. Therefore, the 50 mg/l TSS limitation will apply at all times.

Guidance Memo No. 14-2011 also applies, however the limitation and monitoring frequencies listed above shall remain. Data may be obtained using the requirements already in place.

Oil & Grease: 15 mg/l monthly average and 20 mg/l maximum, 1/month by a grab sample. Limits based on FEG, sample frequency reduced due to change in operations and to be more in line with the other sampling frequencies.

Nitrite + Nitrate and TKN: No limit, however monitoring is required 1/Year by a grab sample. Based on the new Guidance Memo No. 14-2011 requires monitoring for Nitrite and Nitrate and TKN in order to develop data necessary to reevaluate the Virginia point source WLAs included in the Chesapeake Bay TMDL. The discharge includes process industrial activity sources therefore monitoring is 1/Year.

Added Dissolved Zinc: No limit, 1/month monitoring by a grab sample. During the previous permit reissuance, data analysis indicated the need for a zinc limit of 180 ug/l. This limit was derived based on three data points and it was staff's professional judgement to implement a zinc monitoring program in lieu of a limit. The facility has significantly changed operational status since the reissuance of the permit. In order to enhance the characterization of any changes in the stormwater discharges resulting from the decommissioned activities monitoring will be performed in lieu of a limitation.

Added: Dissolved Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Cobalt, Copper, Iron, Lead, Mercury, Molybdenum, Nickel, Silver, Thallium, Vanadium, Chromium VI; and Total Recoverable Selenium. No limit; however, monitoring is required 1/Quarter by grab sample. These new monitoring requirements of constituents that are characteristic of discharges associated with coal combustion residual impoundment closures (see Outfall 207 discussion, below) are to enable a cumulative evaluation of the comingling of structural fill runoff/leachate and other wastewater streams with the Outfall 207 dewatering discharge.

OUTFALL 201

The discharges associated with this outfall have not changed; the following sources still apply as listed in the description for the Part I.A. page: Metals Treatment Basin

All parameters remain the same

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DISCHARGES ASSOCIATED WITH COAL COMBUSTION RESIDUAL IMPOUNDMENT CLOSURE: EFFLUENT SCREENING AND LIMITATION DEVELOPMENT

OUTFALL 207

Effective October 2015, the U.S. Environmental Protection Agency (EPA) adopted a final Rule that will regulate the disposal of coal combustion residuals (CCR) as solid waste under subtitle D of the Resource Conservation and Recovery Act. Coal combustion residuals (otherwise known as coal ash) may include fly ash, bottom ash, boiler slag, and other low volume waste materials and are generated from burning coal for the purposes of generating electrical power. Disposal of the CCRs at this facility has historically been accomplished in impoundments located on site. These impoundments include surface waters originating from precipitation, storm water runoff into the impoundments, comingled process wastewaters, and waters used to hydraulically dredge ash from one pond to another. Interstitial, or pore, waters, also exist within the bottom residual mass of the impoundment. Due to its direct contact and exposure to the coal ash materials, the pollutant concentrations of the coal ash interstitial waters may pose a reasonable potential to exceed established water quality criteria. In response to EPA's 2015 CCR Rule, the owner plans to remove and discharge the accumulated waters to dry the ash and residuals that have settled to the bottom of the impoundment. This process is expected to involve the disturbance, movement, or re-suspension of the bottom residuals. Drying the ash and bottom residuals will facilitate their subsequent removal or construction of a closure cap of the impoundment system.

To identify and evaluate constituents of potential concern (COPC) associated with the removal of waters from the coal ash ponds, DEQ relied upon work previously performed by the EPA and documented in the following: 1) 40CFR Part 423 "federal effluent limitation guidelines (ELGs) for the "Steam Electric Power Generating Point Source Category;" 2) a June 7, 2010 EPA memorandum titled, "National Pollutant Discharge Elimination System (NPDES) Permitting of Wastewater Discharges from Flue Gas Desulfurization (FGD) and Coal Combustion Residual (CCR) Impoundments at Steam Electric Power Plants;" and 3) a 2015 final Rule (commonly referred to as the "CCR Rule") that amended 40 CFR §§257.50 - 257.107, "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments."

In its June 2010 memo,[1] EPA identified 37 chemical parameters that had the potential to exist in relatively high concentrations in CCR effluent. Several years later, in the preamble to the 2015 CCR Rule, EPA identified 35 "Table 1"[2] chemical parameters that represented a hazard potential because they were characteristic of releases from coal combustion impoundments and may pose a toxicity risk potential. EPA performed further probabilistic analyses of the potential risks to human health and ecological receptors from the 35 Table 1 constituents and narrowed the list down to 23 "Table 2"[3] parameters (List of Chemical Constituents Retained for Probabilistic Analysis). These parameters include Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chloride, Chromium, Cobalt, Copper, Fluoride, Iron, Lead, Lithium, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium and Zinc.

Although the parameters listed in the CCR Rule Table 2 represent potential risks from CCR leachate releases, a conservative assumption was made that the probabilistic risks associated with leachate releases would be comparable to concerns associated with the release of CCR pore water. These 23 Table 2 constituents and all other constituents were classified in one of 4 categories for consideration.

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1 United States Environmental Protection Agency, June 7, 2010 Memorandum from James A. Hanlon, Director, Office of Wastewater Management to Water Division Directors Regions 1 – 10; "National Pollutant Discharge Elimination System (NPDES) Permitting of Wastewater Discharges from Flue Gas Desulfurization (FGD) and Coal Combustion Residual (CCR) Impoundments at Steam Electric Power Plants," Attachment B, Water Quality-Based Effluent Limits, Coal Combustion Waste Impoundments; Appendix A, Steam Electric 2007/2008 Detailed Study Report, Ash Pond Effluent Concentrations.

2 Federal Register, Vol. 80, No. 74, Friday, April 17, 2015, "Table 1 – List of Chemical Constituents Evaluated in the CCR Risk Assessment," page 21449.

3 Federal Register, Vol. 80, No. 74, Friday, April 17, 2015, "Table 2 – List of Chemical Constituents Retained for Probabilistic Analysis," page 21450.

- **Category 1 - Table 2 constituents for which water quality criteria have been adopted in the Virginia Water Quality Standards regulation (9VAC25-260):** Water quality based effluent limitations were developed for these parameters regardless of whether or not the existing data for the facility demonstrated a reasonable potential to exceed the water quality criteria. Effluent limitations were developed in this fashion for Antimony, Arsenic, Cadmium, Chromium VI, Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium, and Zinc. There are no water quality criteria that are applicable to the aquatic life designation for Antimony or Thallium. For these parameters, the effluent limitation is equal to the most limiting allocation for human health.

  This facility discharges to salt waters that have not been designated as Public Water Supplies. Unlike the "Category 2" constituents (described below), fresh water aquatic life and Public Water Supply water quality criteria have been established for Chloride and Chromium III; however, there are no salt water or other human health Chloride or Chromium III water quality criteria applicable to this site. Based on this exception, monitoring or numeric limitations for Chloride and Chromium III is not expected to be meaningful. Therefore, further controls or evaluations of Chloride and Chromium III for this facility are not warranted.

- **Category 2 - Table 2 constituents for which water quality criteria have not been adopted in the the Virginia Water Quality Standards regulation (9VAC25-260):** A Whole Effluent Toxicity limitation was established in the absence of an applicable Virginia numeric water quality criterion. This approach is consistent with EPA's Technical Support Document for Water Quality-based Toxics Control and the June 7, 2010 EPA memorandum. Parameters included in this category include Aluminum, Barium, Beryllium, Boron, Cobalt, Iron, Molybdenum and Vanadium. Attachment 8 details the derivation of the calculated WET limitations that will be included with this permit action.

- **Category 3 - Constituents not listed in Table 2 for which water quality criteria have been adopted in the Virginia Water Quality Standards regulation (9VAC25-260):** A reasonable potential analysis was performed to determine the need for water-quality based effluent limitations on a case-by-case basis and resulted in no additional effluent numeric limitations.

- **Category 4 - Federal Effluent Guidelines:** Technology-based effluent limits were assigned to applicable constituents addressed by the Federal Effluent Guidelines and not otherwise controlled by a more restrictive water quality-based effluent limitation. Constituents limited under this category include TSS, Oil & Grease, and pH.

The dewatering wastewaters are to be managed to address the monitoring and effluent limitations established. The management of the dewatering wastewaters may include the use of interim treatment systems. The internal outfall is designated as follows:

Outfall 207 - Process wastewater from dewatering activities in the Bottom Ash Pond or Industrial Landfill Facility

Reasonable potential analysis was performed to determine the effluent limitations for Outfall 207. As stated previously in the rationale for effluent limitation more specifically for tidal waters, consistent with existing agency guidance (GM 02-2011), default mixing ratios of 50:1 for chronic and human health criteria and 2:1 for acute criteria were used to calculate the waste load allocations (WLAs) at each of the discharge outfalls, with the exception of Outfall 207. At Outfall 207, due to the unique and sensitive nature of the effluent discharge at this outfall, a more stringent and conservative mixing ratio of 5:1 was used to establish WLAs for chronic and human health criteria, based on staff professional judgment. These WLAs were then used in the STATs program to determine the effluent limitations.

It is staff's professional judgment that the effluent limits be applied to the discharges of dewatering wastewaters (Internal Outfall 207) rather than being applied at Outfall 002. Meeting effluent limits at the internal outfalls will protect and maintain water quality at any of the outfalls identified as discharge options, while providing Dominion with the flexibility needed to achieve closure by the required deadline.

This is a new discharge internal outfall. This discharge consists of interim treatment systems for treatment of dewatering wastewaters associated with the Bottom Ash Pond during closure. Any process wastewater removed from the Bottom Ash Pond or Industrial Landfill Facility for discharge purposes is considered to be process wastewater from dewatering activities. The following parameters will be monitored and/limited:

Flow: 0.094 MGD daily maximum flow limit with monthly average monitoring, 3/Week by measurement.

For construction dewatering for the installation of the leachate collection pipe in the landfill, the estimated flow is 30 GMP (0.0144 MGD) and for construction dewatering for the bottom ash pond, the flow is estimated at 100 GPM (0.048 MGD). The total discharge rate is limited to 0.094 MGD for a maximum discharge of twelve hours per day. Both of these dewatering flows would likely be for a period of 60 days or less (each, may not be concurrent) while construction proceeds.

pH: 6.0 min - 9.0 max SU, 3/Week by a grab sample. Limit based on water quality criteria states that pH shall be a minimum value of 6.0 S.U. and a maximum value of 9.0 S.U.

Total Suspended Solids: 30 mg/l monthly average and 100 mg/l daily max, 3/Week by a 4 (four) hour composite sample. Federal Effluent Guidelines (40 CFR 423.12(b)(3) - Best Practicable Technology) state that that the quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of low volume waste sources times the maximum concentration of 100 mg/L and the average concentration of 30 mg/L.

At the permitting authority's discretion (Federal Effluent Guidelines (40 CFR 423.12(b)(12)), the quantity of pollutants allowed to be discharged may be expressed as a concentration limitation instead of the mass based limitation specified in paragraph 423.12(b)(3). It is staff's professional judgment that applying the maximum concentration of 100 mg/L and the average concentration of 30 mg/L to the discharge is a conservative approach and will maintain and protect the water quality of the receiving stream.

Oil & Grease: 15 mg/l monthly average and 20 mg/l maximum, 3/Week by a 4 (four) hour composite sample. Limits based on EPG, sample frequency reduced due to change in operations and to be more in line with the other sampling frequencies.

Total Recoverable Antimony: 3200 ug/l monthly average and 3200 ug/l daily maximum, 3/Week monitoring by a 4 (four) hour composite sample. Limits are based on the receiving stream's waste load allocation for the protection of human health surface water criteria.

Total Recoverable Arsenic: 75 ug/l monthly average and 140 ug/l daily maximum, 3/Week monitoring by a 4 (four) hour composite sample. Limits were generated using STAT.exe, see output information below.

Total Recoverable Cadmium: 35 ug/l monthly average and 64 ug/l daily maximum, 3/Week monitoring by a 4 (four) hour composite sample. Limits were generated using STAT.exe, see output information below.

Dissolved Chromium VI: 200 ug/l monthly average and 360 ug/l daily maximum, 3/Week monitoring by a 4 (four) hour composite sample. Limits were generated using STAT.exe, see output information below. This parameter is described in the dissolved fraction, see 9 VAC 25-31-230.C.3.

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Total Recoverable Copper: 18 ug/l monthly average and 33 ug/l daily maximum, 3/Week monitoring by a 4 (four) hour composite sample. Limits were generated using STAT.exe, see output information below. Special standard "z" applies to copper that is site specific for the Elizabeth River and its tidal tributaries, see 9 VAC 25-260-310.

Total Recoverable Nickel: 33 ug/l monthly average and 60 ug/l daily maximum, 3/Week monitoring by a 4 (four) hour composite sample. Limits were generated using STAT.exe, see output information below.

Total Recoverable Selenium: 280 ug/l monthly average and 520 ug/l daily maximum, 3/Week monitoring by a 4 (four) hour composite sample. Limits were generated using STAT.exe, see output information below.

Total Recoverable Thallium: 2.4 ug/l monthly average and 2.4 ug/l daily maximum, 3/Week monitoring by a 4 (four) hour composite sample. Limits are based on the receiving stream's waste load allocation for the protection of human health surface water criteria.

Total Recoverable Lead: 37 ug/l monthly average and 68 ug/l daily maximum, 3/Week monitoring by a 4 (four) hour composite sample. Limits were generated using STAT.exe, see output information below.

Total Recoverable Mercury: 2.0 ug/l monthly average and 3.6 ug/l daily maximum, 3/Week monitoring by a 4 (four) hour composite sample. Limits were generated using STAT.exe, see output information below.

Total Recoverable Silver: 2.1 ug/l monthly average and 3.8 ug/l daily maximum, 3/Week monitoring by a 4 (four) hour composite sample. Limits were generated using STAT.exe, see output information below.

Total Recoverable Zinc: 98 ug/l monthly average and 180 ug/l daily maximum, 3/Week monitoring by a 4 (four) hour composite sample. Limits were generated using STAT.exe, see output information below.

Dissolved Aluminum, Barium, Beryllium, Boron, Cobalt, Iron, Molybdenum, Vanadium: No limit, monthly average and daily maximum monitoring required, 1/Month by a 4 (four) hour composite sample. PJ to protect water quality, no limit because there is no Water Quality Standard for Salt Water. No applicable VA WQS exist for these parameters. In lieu of limits for these parameters, WET limitations were developed to identify any potential toxicity issues associated with the discharge of these parameters. Monitoring concurrent with the WET monitoring is required in this permit. Should any toxicity be demonstrated through the WET monitoring, the concurrent monitoring for the parameters above will assist in identifying the source of the toxicity.

Whole Effluent Toxicity limitation: As discussed above, closure activities are assumed to have the greatest potential to contain elevated metals in the discharge from this outfall. To address the potential toxic characteristics of the closure discharge and to provide limitations on parameters known to be present in CCRs for which there are no water quality standards, acute and chronic WET testing limitations are added to this permit. See **Attachments B** for further discussion of WET limit development for this outfall.

OUTFALL 003

The discharges associated with this outfall have minimized and the following discharge sources apply as listed in the description for the Part I.A. page: Regulated stormwater from coal pile runoff; bermed closed bulk storage fuel area runoff (301), dock stormwater; wash water overflow; combustion turbine area runoff.

The coal pile area and associated stormwater runoff pond may be closed in 2016. During the next reissuance of the permit, the coal pile runoff pond should be closed, lined, and become a stormwater BMP pond. At that point, the discharge may be considered stormwater only from that area and limitations/monitoring requirements associated with the coal pile runoff may be removed from the requirements of the discharge at outfall 003.

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Added Dissolved Iron: No limit, however 1/6 months monitoring by a grab sample. This is based on PJ and the 2014 Industrial Stormwater General Permit, Sector O (Steam Electric Utilities) requirements for monitoring of iron from stormwater discharges associated with this type of facility.

Added Total Phosphorus, Nitrite + Nitrate, TKN and Total Nitrogen: No limit, however monitoring is required 1/Year by a grab sample. Based on the new Guidance Memo No. 14-2011 requires the monitoring in order to develop data necessary to reevaluate the Virginia point source WLAs included in the Chesapeake Bay TMDL. The discharge includes process industrial activity sources therefore monitoring is 1/Year.

All other parameters remain the same.

OUTFALL 301

The discharges associated with this outfall have not changed and the following sources still apply as listed in the description for the Part I.A. page: Bermed closed bulk storage fuel area.

The Aboveground Storage Tank in the bermed area is no longer on site and has been dismantled. However, the area is still bermed and therefore the requirements in the permit will remain.

All parameters remain the same with a decrease in monitoring frequency from 1/3 months to 1/6 months.

OUTFALL 010

The discharges associated with this outfall have changed and the following sources still apply as listed in the description for the Part I.A. page: Regulated stormwater runoff from industrial activity areas including old ash silo area, truck washes and decommissioning activities.

pH: 6.0 SU min and 9.0 SU max, 1/6 months by a grab sample. Limits based on water quality criteria states that pH shall be a minimum value of 6.0 S.U. and a maximum value of 9.0 S.U.

Added Total Phosphorus, Nitrite + Nitrate, TKN and Total Nitrogen: No limit, however monitoring is required 1/Year by a grab sample. Based on the new Guidance Memo No. 14-2011 requires the monitoring in order to develop data necessary to reevaluate the Virginia point source WLAs included in the Chesapeake Bay TMDL. The discharge includes process industrial activity sources therefore monitoring is 1/Year.

Dissolved Zinc: No limit, 1/Quarter monitoring by a grab sample. The monitoring frequency changed from 1/Year to 1/3 Months due to the historical presence of zinc at this Outfall, and to enhance the characterization of any changes in the storm water discharges resulting from the decommissioned activities.

All other parameters remain the same.

OUTFALLS 011 AND 012

The discharges associated with this outfall have not changed; the following sources still apply as listed in the description for the Part I.A. page: Regulated stormwater runoff from industrial activity areas including the loop track and bermed south tank fuel oil storage area.

Added Total Phosphorus, Nitrite + Nitrate, TKN and Total Nitrogen: No limit, however monitoring is required 1/6 months by a grab sample. Based on the new Guidance Memo No. 14-2011 requires the monitoring in order to develop data necessary to reevaluate the Virginia point source WLAs included in the Chesapeake Bay TMDL. Monitoring is 1/6 months per guidance on stormwater only discharges.

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All other parameters remain the same.

OUTFALLS 016 AND 017

The discharges associated with this outfall have not changed; the following sources still apply as listed in the description for the Part I.A. page:
Regulated stormwater runoff from an industrial activity area, these outfalls are considered substantially identical; outfall 016 may be sampled as a representative outfall for 017; sample results shall be reported for both outfalls.

pH: Monitoring frequency changed from 1/year to 1/3 months based on improved data analysis with monitoring at the same frequency as metals.

TSS: Monitoring frequency changed from 1`/year to 1/6 months as required by new Guidance Memo No 14-2011 and previous guidance document 93-010A for stormwater category #14 - Steam Electric Power Generating, Coal Handling Areas.

Added Total Phosphorus, Nitrite + Nitrate, TKN and Total Nitrogen: No limit, however monitoring is required 1/6 months by a grab sample. Based on the new Guidance Memo No. 14-2011 requires the monitoring in order to develop data necessary to reevaluate the Virginia point source WLAs included in the Chesapeake Bay TMDL. Monitoring is 1/6 months per guidance on stormwater only discharges.

All other parameters remain the same

OUTFALL 030

The facility is no longer operating the coal unloading dock and no longer receiving coal. This is now a stormwater only discharge with no monitoring associated with the outfall. No process water shall be discharged through this outfall. This outfall is listed on the page with Outfalls 013, 015, 018 and 021.

The Quantification levels using saltwater designation for the metals for Outfalls 002, 010 and 003 were determined as follows:

Arsenic based on WLAa = 138 X 0.4 = 55.2
Arsenic based on WLAc = 1800 X 0.6 = 1080

(Since the lowest QL is >1.0 ug/l, IAW Guidance a QL of 55.2 ug/l is assigned for Arsenic). QL is rounded to 55 ug/l for ease of laboratory analysis.

Cadmium based on WLAa = 80 X 0.4 =32
Cadmium based on WLAc = 440 X 0.6 = 264

(Since the lowest QL is >0.3 ug/l, IAW Guidance a QL of 32 ug/l is assigned for Cadmium).

Chromium VI based on WLAa = 2200 X 0.4 = 880
Chromium VI based on WLAc = 2500 X 0.6 = 1500

(Since the lowest QL is >0.5 ug/l, IAW Guidance a QL of 880 ug/l is assigned for Chromium).

Copper based on WLAa = 32.6 X 0.4 = 13.04
Copper based on WLAc = 525 X 0.6 = 315

(Since the lowest QL is >0.5 ug/l, IAW Guidance a QL of 13.04 ug/l is assigned for Copper). QL is rounded to 13 ug/l for ease of laboratory analysis.

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Lead based on WLAa = 480 X 0.4 = 192
Lead based on WLAc = 465 X 0.6 = 279

(Since the lowest QL is >0.5 ug/l, IAW Guidance a QL of 192 ug/l is assigned for Lead). QL is rounded to 190 ug/l for ease of laboratory analysis.

Mercury based on WLAa = 3.6 X 0.4 = 1.44
Mercury based on WLAc = 47 X 0.6 = 28.2

(Since the lowest QL is >1.0 ug/l, IAW Guidance a QL of 1.44 ug/l is assigned for Mercury). QL is rounded to 1.4 ug/l for ease of laboratory analysis.

Nickel based on WLAa = 148 X 0.4 = 59.2
Nickel based on WLAc = 410 X 0.6 = 246

(Since the lowest QL is >0.5 ug/l, IAW Guidance a QL of 59.2 ug/l is assigned for Nickel). QL is rounded to 59 ug/l for ease of laboratory analysis.

Selenium based on WLAa = 580 X 0.4 = 232
Selenium based on WLAc = 3550 X 0.6 = 2130

(Since the lowest QL is >2.0 ug/l, IAW Guidance a QL of 232 ug/l is assigned for Selenium). Ql is rounded to 230 ug/l for ease of laboratory analysis.

Silver based on WLAa = 3.8 X 0.4 = 1.52

(Since the lowest QL is >0.20 ug/l, IAW Guidance, a QL of 1.52 ug/l is assigned for Silver). QL is rounded to 1.5 ug/l for ease of laboratory analysis.

Zinc based on WLAa = 180 X 0.4 = 72
Zinc based on WLAc = 4050 X 0.6 = 2430

(Since the lowest QL is >2.0 ug/l, IAW Guidance a QL of 72 ug/l is assigned for Zinc).

QLs for metals will equal the lesser of 0.4 WLAa or 0.6 WLAc, but not less than the lowest DEQ-certified metal specific method QL [which are Ag = 0.20; Al = 2.0; As = 1.0; Cd = 0.30; Cr = 0.50; Cu = 0.50; Fe = 1.0; Hg = 1.0; Mn = 0.20; Ni = 0.50; Pb = 0.50; Sb = 0.20; Se = 2.0; Zn = 2.0 (all in ug/l); all other QLs are to be taken directly from GM00-2011, as amended/updated. Qls may be rounded for ease of laboratory analysis.

DRAFT

PART 423—STEAM ELECTRIC POWER GENERATING POINT SOURCE CATEGORY

(Effective January 4, 2016)

Sec.
423.10 Applicability.
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423.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
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423.15 New source performance standards (NSPS).
423.16 Pretreatment standards for existing sources (PSES).
423.17 Pretreatment standards for new sources (PSNS).
APPENDIX A TO PART 423—126 PRIORITY POLLUTANTS

Authority: Secs. 101; 301; 304(b), (c), (e), and (g); 306; 307; 308 and 501, Clean Water Act (Federal Water Pollution Control Act Amendments of 1972, as amended; 33 U.S.C. 1251; 1311; 1314(b), (c), (e), and (g); 1316; 1317; 1318 and 1361).

§ 423.10 Applicability.

The provisions of this part apply to discharges resulting from the operation of a generating unit by an establishment whose generation of electricity is the predominant source of revenue or principal reason for operation, and whose generation of electricity results primarily from a process utilizing fossil-type fuel (coal, oil, or gas), fuel derived from fossil fuel (*e.g.*, petroleum coke, synthesis gas), or nuclear fuel in conjunction with a thermal cycle employing the steam water system as the thermodynamic medium. This part applies to discharges associated with both the combustion turbine and steam turbine portions of a combined cycle generating unit.

§ 423.11 Specialized definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) The term *total residual chlorine* (or total residual oxidants for intake water with bromides) means the value obtained using any of the "chlorine—total residual" methods in Table IB in 40 CFR 136.3(a), or other methods approved by the permitting authority.

(b) The term *low volume waste sources* means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations or standards are otherwise established in this part. Low volume waste sources include, but are not limited to, the following: Wastewaters from ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, recirculating house service water systems, and wet scrubber air pollution control systems whose primary purpose is particulate removal. Sanitary wastes, air conditioning wastes, and wastewater from carbon capture or sequestration systems are not included in this definition.

(c) The term *chemical metal cleaning waste* means any wastewater resulting from the cleaning of any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning.

(d) The term *metal cleaning waste* means any wastewater resulting from cleaning [with or without chemical cleaning compounds] any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.

(e) The term *fly ash* means the ash that is carried out of the furnace by a gas stream and collected by a capture device such as a mechanical precipitator, electrostatic precipitator, or fabric filter. Economizer ash is included in this definition when it is collected with fly ash. Ash is not included in this definition when it is collected in wet scrubber air pollution control systems whose primary purpose is particulate removal.

(f) The term *bottom ash* means the ash, including boiler slag, which settles in the furnace or is dislodged from furnace walls. Economizer ash is included in this definition when it is collected with bottom ash.

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(g) The term *once through cooling water* means water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat.

(h) The term *recirculated cooling water* means water which is passed through the main condensers for the purpose of removing waste heat, passed through a cooling device for the purpose of removing such heat from the water and then passed again, except for blowdown, through the main condenser.

(i) The term *10 year, 24/hour rainfall event* means a rainfall event with a probable recurrence interval of once in ten years as defined by the National Weather Service in Technical Paper No. 40. *Rainfall Frequency Atlas of the United States,* May 1961 or equivalent regional rainfall probability information developed therefrom.

(j) The term *blowdown* means the minimum discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts exceeding limits established by best engineering practices.

(k) The term *average concentration* as it relates to chlorine discharge means the average of analyses made over a single period of chlorine release which does not exceed two hours.

(l) The term *free available chlorine* means the value obtained using any of the "chlorine—free available" methods in Table IB in 40 CFR 136.3(a) where the method has the capability of measuring free available chlorine, or other methods approved by the permitting authority.

(m) The term *coal pile runoff* means the rainfall runoff from or through any coal storage pile.

(n) The term *flue gas desulfurization (FGD) wastewater* means any wastewater generated specifically from the wet flue gas desulfurization scrubber system that comes into contact with the flue gas or the FGD solids, including but not limited to, the blowdown from the FGD scrubber system, overflow or underflow from the solids separation process, FGD solids wash water, and the filtrate from the solids dewatering process. Wastewater generated from cleaning the FGD scrubber, cleaning FGD solids separation equipment, cleaning FGD solids dewatering equipment, or that is collected in floor drains in the FGD process area is not considered FGD wastewater.

(o) The term *flue gas mercury control wastewater* means any wastewater generated from an air pollution control system installed or operated for the purpose of removing mercury from flue gas. This includes fly ash collection systems when the particulate control system follows sorbent injection or other controls to remove mercury from flue gas. FGD wastewater generated at plants using oxidizing agents to remove mercury in the FGD system and not in a separate FGMC system is not included in this definition.

(p) The term *transport water* means any wastewater that is used to convey fly ash, bottom ash, or economizer ash from the ash collection or storage equipment, or boiler, and has direct contact with the ash. Transport water does not include low volume, short duration discharges of wastewater from minor leaks (*e.g.*, leaks from valve packing, pipe flanges, or piping) or minor maintenance events (*e.g.*, replacement of valves or pipe sections).

(q) The term *gasification wastewater* means any wastewater generated at an integrated gasification combined cycle operation from the gasifier or the syngas cleaning, combustion, and cooling processes. Gasification wastewater includes, but is not limited to the following: Sour/grey water; CO2/steam stripper wastewater; sulfur recovery unit blowdown, and wastewater resulting from slag handling or fly ash handling, particulate removal, halogen removal, or trace organic removal. Air separation unit blowdown, noncontact cooling water, and runoff from fuel and/ or byproduct piles are not considered gasification wastewater. Wastewater that is collected intermittently in floor drains in the gasification process area from leaks, spills, and cleaning occurring during normal operation of the gasification operation is not considered gasification wastewater.

(r) The term *combustion residual leachate* means leachate from landfills or surface impoundments containing combustion residuals. Leachate is composed of liquid, including any suspended or dissolved constituents in the liquid, that has percolated through waste or other materials emplaced in a landfill, or that passes through the surface impoundment's containment structure (*e.g.*, bottom, dikes, berms). Combustion residual leachate includes seepage and/or leakage from a combustion residual landfill or impoundment unit. Combustion residual leachate includes wastewater from landfills and surface impoundments located on non-adjoining property when under the operational control of the permitted facility.

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(s) The term *oil-fired unit* means a generating unit that uses oil as the primary or secondary fuel source and does not use a gasification process or any coal or petroleum coke as a fuel source. This definition does not include units that use oil only for start up or flame-stabilization purposes.

(t) The phrase *"as soon as possible"* means November 1, 2018, unless the permitting authority establishes a later date, after receiving information from the discharger, which reflects a consideration of the following factors:

(1) Time to expeditiously plan (including to raise capital), design, procure, and install equipment to comply with the requirements of this part.

(2) Changes being made or planned at the plant in response to:

(i) New source performance standards for greenhouse gases from new fossil fuel-fired electric generating units, under sections 111, 301, 302, and 307(d)(1)(C) of the Clean Air Act, as amended, 42 U.S.C. 7411, 7601, 7602, 7607(d)(1)(C);

(ii) Emission guidelines for greenhouse gases from existing fossil fuel-fired electric generating units, under sections 111, 301, 302, and 307(d) of the Clean Air Act, as amended, 42 U.S.C. 7411, 7601, 7602, 7607(d); or

(iii) Regulations that address the disposal of coal combustion residuals as solid waste, under sections 1006(b), 1008(a), 2002(a), 3001, 4004, and 4005(a) of the Solid Waste Disposal Act of 1970, as amended by the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. 6906(b), 6907(a), 6912(a), 6944, and 6945(a).

(3) For FGD wastewater requirements only, an initial commissioning period for the treatment system to optimize the installed equipment.

(4) Other factors as appropriate.

§ 423.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

(a) In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, utilization of facilities, raw materials, manufacturing processes, non-water quality environmental impacts, control and treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry.

An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES Permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors.

Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The phrase "other such factors" appearing above may include significant cost differentials. In no event may a discharger's impact on receiving water quality be considered as a factor under this paragraph.

(b) Any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction by the application of the best practicable control technology currently available (BPT):

(1) The pH of all discharges, except once through cooling water, shall be within the range of 6.0–9.0.

(2) There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

(3) The quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of low volume waste sources times the concentration listed in the following table:

Pollutant or pollutant property	BPT Effluent limitations	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0

(4) The quantity of pollutants discharged in fly ash and bottom ash transport water shall not exceed the quantity determined by multiplying the flow of fly ash and bottom ash transport water times the concentration listed in the following table:

Pollutant or pollutant property	BPT Effluent limitations	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0

(5) The quantity of pollutants discharged in metal cleaning wastes shall not exceed the quantity determined by multiplying the flow of metal cleaning wastes times the concentration listed in the following table:

Pollutant or pollutant property	BPT Effluent limitations	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0
Copper, total	1.0	1.0
Iron, total	1.0	1.0

(6) The quantity of pollutants discharged in once through cooling water shall not exceed the quantity determined by multiplying the flow of once through cooling water sources times the concentration listed in the following table:

Pollutant or pollutant property	BPT Effluent limitations	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine	0.5	0.2

(7) The quantity of pollutants discharged in cooling tower blowdown shall not exceed the quantity determined by multiplying the flow of cooling tower blowdown sources times the concentration listed in the following table:

Pollutant or pollutant property	BPT Effluent limitations	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine	0.5	0.2

(8) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State, if the State has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level or chlorination.

(9) Subject to the provisions of paragraph (b)(10) of this section, the following effluent limitations shall apply to the point source discharges of coal pile runoff:

Pollutant or pollutant property	BPT Effluent limitations
	Maximum concentration for any time (mg/l)
TSS	50

(10) Any untreated overflow from facilities designed, constructed, and operated to treat the volume of coal pile runoff which is associated with a 10 year, 24 hour rainfall event shall not be subject to the limitations in paragraph (b)(9) of this section.

(11) The quantity of pollutants discharged in FGD wastewater, flue gas mercury control wastewater, combustion residual leachate, or gasification wastewater shall not exceed the quantity determined by multiplying the flow of the applicable wastewater times the concentration listed in the following table:

Pollutant or pollutant property	BPT Effluent limitations	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0

(12) At the permitting authority's discretion, the quantity of pollutant allowed to be discharged may be expressed as a concentration limitation instead of the mass-based limitations specified in paragraphs (b)(3) through (b)(7), and (b)(11), of this section. Concentration limitations shall be those concentrations specified in this section.

(13) In the event that wastestreams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled in paragraphs (b)(1) through (b)(12) of this section attributable to each controlled waste source shall not exceed the specified limitations for that waste source.

§ 423.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this part must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

(a) There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

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(b) (1) For any plant with a total rated electric generating capacity of 25 or more megawatts, the quantity of pollutants discharged in once through cooling water from each discharge point shall not exceed the quantity determined by multiplying the flow of once through cooling water from each discharge point times the concentration listed in the following table:

Pollutant or pollutant property	BAT Effluent limitations Maximum concentration (mg/l)
Total residual chlorine	0.20

(2) Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control. Simultaneous multi-unit chlorination is permitted.

(c) (1) For any plant with a total rated generating capacity of less than 25 megawatts, the quantity of pollutants discharged in once through cooling water shall not exceed the quantity determined by multiplying the flow of once through cooling water sources times the concentration listed in the following table:

Pollutant or pollutant property	BAT Effluent limitations	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine	0.5	0.2

(2) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State, if the State has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

(d) (1) The quantity of pollutants discharged in cooling tower blowdown shall not exceed the quantity determined by multiplying the flow of cooling tower blowdown times the concentration listed below:

Pollutant or pollutant property	BAT Effluent limitations	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine	0.5	0.2

Pollutant or pollutant property	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
The 126 priority pollutants (Appendix A) contained in chemicals added for cooling tower maintenance, except:	([1])	([1])
Chromium, total	0.2	0.2
Zinc, total	1.0	1.0

[1] No detectable amount.

(2) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State, if the State has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

(3) At the permitting authority's discretion, instead of the monitoring specified in 40 CFR 122.11(b) compliance with the limitations for the 126 priority pollutants in paragraph (d)(1) of this section may be determined by

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engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR part 136.

(e) The quantity of pollutants discharged in chemical metal cleaning wastes shall not exceed the quantity determined by multiplying the flow of chemical metal cleaning wastes times the concentration listed in the following table:

Pollutant or pollutant property	BAT Effluent limitations	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
Copper, total	1.0	1.0
Iron, total	1.0	1.0

(f) [Reserved—Nonchemical Metal Cleaning Wastes].

(g) (1) (i) *FGD wastewater.* Except for those discharges to which paragraph (g)(2) or (g)(3) of this section applies, the quantity of pollutants in FGD wastewater shall not exceed the quantity determined by multiplying the flow of FGD wastewater times the concentration listed in the table following this paragraph (g)(1)(i). Dischargers must meet the effluent limitations for FGD wastewater in this paragraph by a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023. These effluent limitations apply to the discharge of FGD wastewater generated on and after the date determined by the permitting authority for meeting the effluent limitations, as specified in this paragraph.

Pollutant or pollutant property	BAT Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Arsenic, total (µg/L)	11	8
Mercury, total (ng/L)	788	356
Selenium, total (µg/L)	23	12
Nitrate/nitrite as N (mg/L)	17.0	4.4

(ii) For FGD wastewater generated before the date determined by the permitting authority, as specified in paragraph (g)(1)(i), the quantity of pollutants discharged in FGD wastewater shall not exceed the quantity determined by multiplying the flow of FGD wastewater times the concentration listed for TSS in § 423.12(b)(11).

(2) For any electric generating unit with a total nameplate capacity of less than or equal to 50 megawatts or that is an oil-fired unit, the quantity of pollutants discharged in FGD wastewater shall not exceed the quantity determined by multiplying the flow of FGD wastewater times the concentration listed for TSS in § 423.12(b)(11).

(3) (i) For dischargers who voluntarily choose to meet the effluent limitations for FGD wastewater in this paragraph, the quantity of pollutants in FGD wastewater shall not exceed the quantity determined by multiplying the flow of FGD wastewater times the concentration listed in the table following this paragraph (g)(3)(i). Dischargers who choose to meet the effluent limitations for FGD wastewater in this paragraph must meet such limitations by December 31, 2023. These effluent limitations apply to the discharge of FGD wastewater generated on and after December 31, 2023.

Pollutant or pollutant property	BAT Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed

Arsenic, total (µg/L)	4	.....
Mercury, total (ng/L)	39	24
Selenium, total (µg/L)	5	.....
TDS (mg/L)	50	24

(ii) For discharges of FGD wastewater generated before December 31, 2023, the quantity of pollutants discharged in FGD wastewater shall not exceed the quantity determined by multiplying the flow of FGD wastewater times the concentration listed for TSS in § 423.12(b)(11).

(h) (1) (i) *Fly ash transport water.* Except for those discharges to which paragraph (h)(2) of this section applies, or when the fly ash transport water is used in the FGD scrubber, there shall be no discharge of pollutants in fly ash transport water. Dischargers must meet the discharge limitation in this paragraph by a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023. This limitation applies to the discharge of fly ash transport water generated on and after the date determined by the permitting authority for meeting the discharge limitation, as specified in this paragraph. Whenever fly ash transport water is used in any other plant process or is sent to a treatment system at the plant (except when it is used in the FGD scrubber), the resulting effluent must comply with the discharge limitation in this paragraph. When the fly ash transport water is used in the FGD scrubber, the quantity of pollutants in fly ash transport water shall not exceed the quantity determined by multiplying the flow of fly ash transport water times the concentration listed in the table in paragraph (g)(1)(i) of this section.

(ii) For discharges of fly ash transport water generated before the date determined by the permitting authority, as specified in paragraph (h)(1)(i) of this section, the quantity of pollutants discharged in fly ash transport water shall not exceed the quantity determined by multiplying the flow of fly ash transport water times the concentration listed for TSS in § 423.12(b)(4).

(2) For any electric generating unit with a total nameplate generating capacity of less than or equal to 50 megawatts or that is an oil-fired unit, the quantity of pollutants discharged in fly ash transport water shall not exceed the quantity determined by multiplying the flow of fly ash transport water times the concentration listed for TSS in § 423.12(b)(4).

(i) (1) (i) *Flue gas mercury control wastewater.* Except for those discharges to which paragraph (i)(2) of this section applies, there shall be no discharge of pollutants in flue gas mercury control wastewater. Dischargers must meet the discharge limitation in this paragraph by a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023. This limitation applies to the discharge of flue gas mercury control wastewater generated on and after the date determined by the permitting authority for meeting the discharge limitation, as specified in this paragraph. Whenever flue gas mercury control wastewater is used in any other plant process or is sent to a treatment system at the plant, the resulting effluent must comply with the discharge limitation in this paragraph.

(ii) For discharges of flue gas mercury control wastewater generated before the date determined by the permitting authority, as specified in paragraph (i)(1)(i) of this section, the quantity of pollutants discharged in flue gas mercury control wastewater shall not exceed the quantity determined by multiplying the flow of flue gas mercury control wastewater times the concentration for TSS listed in § 423.12(b)(11).

(2) For any electric generating unit with a total nameplate generating capacity of less than or equal to 50 megawatts or that is an oil-fired unit, the quantity of pollutants discharged in flue gas mercury control wastewater shall not exceed the quantity determined by multiplying the flow of flue gas mercury control wastewater times the concentration for TSS listed in § 423.12(b)(11).

(j) (1) (i) *Gasification wastewater.* Except for those discharges to which paragraph (j)(2) of this section applies, the quantity of pollutants in gasification wastewater shall not exceed the quantity determined by multiplying the flow of gasification wastewater times the concentration listed in the table following this paragraph (j)(1)(i). Dischargers must meet the effluent limitations in this paragraph by a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023. These effluent limitations apply to the discharge of gasification

wastewater generated on and after the date determined by the permitting authority for meeting the effluent limitations, as specified in this paragraph.

Pollutant or pollutant property	BAT Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Arsenic, total (µg/L)	4	.....
Mercury, total (ng/L)	1.8	1.3
Selenium, total (µg/L)	453	227
Total dissolved solids (mg/L)	38	22

(ii) For discharges of gasification wastewater generated before the date determined by the permitting authority, as specified in paragraph (j)(1)(i) of this section, the quantity of pollutants discharged in gasification wastewater shall not exceed the quantity determined by multiplying the flow of gasification wastewater times the concentration for TSS listed in § 423.12(b)(11).

(2) For any electric generating unit with a total nameplate generating capacity of less than or equal to 50 megawatts or that is an oil-fired unit, the quantity of pollutants discharged in gasification wastewater shall not exceed the quantity determined by multiplying the flow of gasification wastewater times the concentration listed for TSS in § 423.12(b)(11).

(k) (1) (i) *Bottom ash transport water.* Except for those discharges to which paragraph (k)(2) of this section applies, or when the bottom ash transport water is used in the FGD scrubber, there shall be no discharge of pollutants in bottom ash transport water. Dischargers must meet the discharge limitation in this paragraph by a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023. This limitation applies to the discharge of bottom ash transport water generated on and after the date determined by the permitting authority for meeting the discharge limitation, as specified in this paragraph. Whenever bottom ash transport water is used in any other plant process or is sent to a treatment system at the plant (except when it is used in the FGD scrubber), the resulting effluent must comply with the discharge limitation in this paragraph. When the bottom ash transport water is used in the FGD scrubber, the quantity of pollutants in bottom ash transport water shall not exceed the quantity determined by multiplying the flow of bottom ash transport water times the concentration listed in the table in paragraph (g)(1)(i) of this section.

(ii) For discharges of bottom ash transport water generated before the date determined by the permitting authority, as specified in paragraph (k)(1)(i) of this section, the quantity of pollutants discharged in bottom ash transport water shall not exceed the quantity determined by multiplying the flow of bottom ash transport water times the concentration for TSS listed in § 423.12(b)(4).

(2) For any electric generating unit with a total nameplate generating capacity of less than or equal to 50 megawatts or that is an oil-fired unit, the quantity of pollutants discharged in bottom ash transport water shall not exceed the quantity determined by multiplying the flow of the applicable wastewater times the concentration for TSS listed in § 423.12(b)(4).

(l) *Combustion residual leachate.* The quantity of pollutants discharged in combustion residual leachate shall not exceed the quantity determined by multiplying the flow of combustion residual leachate times the concentration for TSS listed in § 423.12(b)(11).

(m) At the permitting authority's discretion, the quantity of pollutant allowed to be discharged may be expressed as a concentration limitation instead of any mass based limitations specified in paragraphs (b) through (l) of this section. Concentration limitations shall be those concentrations specified in this section.

(n) In the event that wastestreams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled in paragraphs (a) through (m) of this section attributable to each controlled waste source shall not exceed the specified limitation for that waste source.

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§ 423.14 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]

§ 423.15 New source performance standards (NSPS).

(a) *1982 NSPS.* Any new source as of November 19, 1982, subject to paragraph (a) of this section, must achieve the following new source performance standards, in addition to the limitations in § 423.13 of this part, established on November 3, 2015. In the case of conflict, the more stringent requirements apply:

(1) *pH.* The pH of all discharges, except once through cooling water, shall be within the range of 6.0–9.0.

(2) *PCBs.* There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

(3) *Low volume waste sources, FGD wastewater, flue gas mercury control wastewater, combustion residual leachate, and gasification wastewater.* The quantity of pollutants discharged in low volume waste sources, FGD wastewater, flue gas mercury control wastewater, combustion residual leachate, and gasification wastewater shall not exceed the quantity determined by multiplying the flow of low volume waste sources times the concentration listed in the following table:

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0

(4) *Chemical metal cleaning wastes.* The quantity of pollutants discharged in chemical metal cleaning wastes shall not exceed the quantity determined by multiplying the flow of chemical metal cleaning wastes times the concentration listed in the following table:

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0
Copper, total	1.0	1.0
Iron, total	1.0	1.0

(5) [Reserved]

(6) *Bottom ash transport water.* The quantity of pollutants discharged in bottom ash transport water shall not exceed the quantity determined by multiplying the flow of the bottom ash transport water times the concentration listed in the following table:

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)

TSS	100.0	30.0
Oil and grease	20.0	15.0

(7) *Fly ash transport water.* There shall be no discharge of pollutants in fly ash transport water.

(8) (i) *Once through cooling water.* For any plant with a total rated electric generating capacity of 25 or more megawatts, the quantity of pollutants discharged in once through cooling water from each discharge point shall not exceed the quantity determined by multiplying the flow of once through cooling water from each discharge point times the concentration listed in the following table:

Pollutant or pollutant property	NSPS
	Maximum concentrations (mg/l)
Total residual chlorine	0.20

(ii) Total residual chlorine may only be discharged from any single generating unit for more than two hours per day when the discharger demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control. Simultaneous multi-unit chlorination is permitted.

(9) (i) *Once through cooling water.* For any plant with a total rated generating capacity of less than 25 megawatts, the quantity of pollutants discharged in once through cooling water shall not exceed the quantity determined by multiplying the flow of once through cooling water sources times the concentration listed in the following table:

Pollutant or pollutant property	NSPS	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine	0.5	0.2

(ii) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or state, if the state has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

(10) (i) *Cooling tower blowdown.* The quantity of pollutants discharged in cooling tower blowdown shall not exceed the quantity determined by multiplying the flow of cooling tower blowdown times the concentration listed below:

Pollutant or pollutant property	NSPS	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine	0.5	0.2

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
The 126 priority pollutants (appendix A) contained in chemicals added for cooling tower maintenance, except:	([1])	([1])
Chromium, total	0.2	0.2
Zinc, total	1.0	1.0

[1] No detectable amount.

(ii) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or state, if the state has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

(iii) At the permitting authority's discretion, instead of the monitoring in 40 CFR 122.11(b), compliance with the standards for the 126 priority pollutants in paragraph (a)(10)(i) of this section may be determined by engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR part 136.

(11) *Coal pile runoff.* Subject to the provisions of paragraph (a)(12) of this section, the quantity or quality of pollutants or pollutant parameters discharged in coal pile runoff shall not exceed the standards specified below:

Pollutant or pollutant property	NSPS for any time
TSS	not to exceed 50 mg/l

(12) *Coal pile runoff.* Any untreated overflow from facilities designed, constructed, and operated to treat the coal pile runoff which results from a 10 year, 24 hour rainfall event shall not be subject to the standards in paragraph (a)(11) of this section.

(13) At the permitting authority's discretion, the quantity of pollutant allowed to be discharged may be expressed as a concentration limitation instead of any mass based limitations specified in paragraphs (a)(3) through (10) of this section. Concentration limits shall be based on the concentrations specified in this section.

(14) In the event that wastestreams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled in paragraphs (a)(1) through (13) of this section attributable to each controlled waste source shall not exceed the specified limitation for that waste source.

(b) *2015 NSPS.* Any new source as of November 17, 2015, subject to paragraph (b) of this section, must achieve the following new source performance standards:

(1) *pH.* The pH of all discharges, except once through cooling water, shall be within the range of 6.0–9.0.

(2) *PCBs.* There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

(3) *Low volume waste sources.* The quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of low volume waste sources times the concentration listed in the following table:

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0

(4) *Chemical metal cleaning wastes.* The quantity of pollutants discharged in chemical metal cleaning wastes shall not exceed the quantity determined by multiplying the flow of chemical metal cleaning wastes times the concentration listed in the following table:

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30

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	(mg/l)	consecutive days shall not exceed (mg/l)
TSS	100.0	30.0
Oil and grease	20.0	15.0
Copper, total	1.0	1.0
Iron, total	1.0	1.0

(5) [Reserved]

(6) *Bottom ash transport water.* There shall be no discharge of pollutants in bottom ash transport water. Whenever bottom ash transport water is used in any other plant process or is sent to a treatment system at the plant, the resulting effluent must comply with the discharge standard in this paragraph.

(7) *Fly ash transport water.* There shall be no discharge of pollutants in fly ash transport water. Whenever fly ash transport water is used in any other plant process or is sent to a treatment system at the plant, the resulting effluent must comply with the discharge standard in this paragraph.

(8) (i) *Once through cooling water.* For any plant with a total rated electric generating capacity of 25 or more megawatts, the quantity of pollutants discharged in once through cooling water from each discharge point shall not exceed the quantity determined by multiplying the flow of once through cooling water from each discharge point times the concentration listed in the following table:

Pollutant or pollutant property	NSPS
	Maximum concentrations (mg/l)
Total residual chlorine	0.20

(ii) Total residual chlorine may only be discharged from any single generating unit for more than two hours per day when the discharger demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control. Simultaneous multi-unit chlorination is permitted.

(9) (i) *Once through cooling water.* For any plant with a total rated generating capacity of less than 25 megawatts, the quantity of pollutants discharged in once through cooling water shall not exceed the quantity determined by multiplying the flow of once through cooling water sources times the concentration listed in the following table:

Pollutant or pollutant property	NSPS	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine	0.5	0.2

(ii) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or state, if the state has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

(10) (i) *Cooling tower blowdown.* The quantity of pollutants discharged in cooling tower blowdown shall not exceed the quantity determined by multiplying the flow of cooling tower blowdown times the concentration listed below:

Pollutant or pollutant property	NSPS	
	Maximum concentration (mg/l)	Average concentration (mg/l)
Free available chlorine	0.5	0.2

Pollutant or pollutant property	NSPS

	Maximum for any 1 day (mg/l)	Average of daily values for 30 consecutive days shall not exceed (mg/l)
The 126 priority pollutants (appendix A) contained in chemicals added for cooling tower maintenance, except:	([1])	([1])
Chromium, total	0.2	0.2
Zinc, total	1.0	1.0

[1] No detectable amount.

(ii) Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or state, if the state has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

(iii) At the permitting authority's discretion, instead of the monitoring in 40 CFR 122.11(b), compliance with the standards for the 126 priority pollutants in paragraph (b)(10)(i) of this section may be determined by engineering calculations demonstrating that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR part 136.

(11) *Coal pile runoff.* Subject to the provisions of paragraph (b)(12) of this section, the quantity or quality of pollutants or pollutant parameters discharged in coal pile runoff shall not exceed the standards specified below:

Pollutant or pollutant property	NSPS for any time
TSS	not to exceed 50 mg/l

(12) *Coal pile runoff.* Any untreated overflow from facilities designed, constructed, and operated to treat the coal pile runoff which results from a 10 year, 24 hour rainfall event shall not be subject to the standards in paragraph (b)(11) of this section.

(13) *FGD wastewater.* The quantity of pollutants discharged in FGD wastewater shall not exceed the quantity determined by multiplying the flow of FGD wastewater times the concentration listed in the following table:

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Arsenic, total (µg/L)	4	.....
Mercury, total (ng/L)	39	24
Selenium, total (µg/L)	5	.....
TDS (mg/L)	50	24

(14) *Flue gas mercury control wastewater.* There shall be no discharge of pollutants in flue gas mercury control wastewater. Whenever flue gas mercury control wastewater is used in any other plant process or is sent to a treatment system at the plant, the resulting effluent must comply with the discharge standard in this paragraph.

(15) *Gasification wastewater.* The quantity of pollutants discharged in gasification wastewater shall not exceed the quantity determined by multiplying the flow of gasification wastewater times the concentration listed in the following table:

Pollutant or pollutant property	NSPS	
	Maximum for	Average of daily

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	any 1 day	values for 30 consecutive days shall not exceed
Arsenic, total (µg/L)	4	.....
Mercury, total (ng/L)	1.8	1.3
Selenium, total (µg/L)	453	227
Total dissolved solids (mg/L)	38	22

(16) *Combustion residual leachate.* The quantity of pollutants discharged in combustion residual leachate shall not exceed the quantity determined by multiplying the flow of combustion residual leachate times the concentration listed in the following table:

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Arsenic, total (µg/L)	11	8
Mercury, total (ng/L)	788	356

(17) At the permitting authority's discretion, the quantity of pollutant allowed to be discharged may be expressed as a concentration limitation instead of any mass based limitations specified in paragraphs (b)(3) through (16) of this section. Concentration limits shall be based on the concentrations specified in this section.

(18) In the event that wastestreams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled in paragraphs (b)(1) through (16) of this section attributable to each controlled waste source shall not exceed the specified limitation for that waste source.

§ 423.16 Pretreatment standards for existing sources (PSES).

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES) by July 1, 1984:

(a) There shall be no discharge of polychlorinated biphenol compounds such as those used for transformer fluid.

(b) The pollutants discharged in chemical metal cleaning wastes shall not exceed the concentration listed in the following table:

Pollutant or pollutant property	PSES pretreatment standards
	Maximum for 1 day (mg/L)
Copper, total	1.0

(c) [Reserved—Nonchemical Metal Cleaning Wastes].

(d) (1) The pollutants discharged in cooling tower blowdown shall not exceed the concentration listed in the following table:

Pollutant or pollutant property	PSES pretreatment standards
	Maximum for any time (mg/l)

The 126 priority pollutants (Appendix A) contained in chemicals added for cooling tower maintenance, except:	([1])
Chromium, total	0.2
Zinc, total	1.0

[1] No detectable amount.

(2) At the permitting authority's discretion, instead of the monitoring in 40 CFR 122.11(b), compliance with the limitations for the 126 priority pollutants in paragraph (d)(1) of this section may be determined by engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR part 136.

(e) *FGD wastewater.* For any electric generating unit with a total nameplate generating capacity of more than 50 megawatts and that is not an oil-fired unit, the quantity of pollutants in FGD wastewater shall not exceed the quantity determined by multiplying the flow of FGD wastewater times the concentration listed in the table following this paragraph (e). Dischargers must meet the standards in this paragraph by November 1, 2018. These standards apply to the discharge of FGD wastewater generated on and after November 1, 2018.

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Arsenic, total (µg/L)	11	8
Mercury, total (ng/L)	788	356
Selenium, total (µg/L)	23	12
Nitrate/nitrite as N (mg/L)	17.0	4.4

(f) *Fly ash transport water.* Except when the fly ash transport water is used in the FGD scrubber, for any electric generating unit with a total nameplate generating capacity of more than 50 megawatts and that is not an oil-fired unit, there shall be no discharge of pollutants in fly ash transport water. This standard applies to the discharge of fly ash transport water generated on and after November 1, 2018. Whenever fly ash transport water is used in any other plant process or is sent to a treatment system at the plant (except when it is used in the FGD scrubber), the resulting effluent must comply with the discharge standard in this paragraph. When the fly ash transport water is used in the FGD scrubber, the quantity of pollutants in fly ash transport water shall not exceed the quantity determined by multiplying the flow of fly ash transport water times the concentration listed in the table in paragraph (e) of this section.

(g) *Bottom ash transport water.* Except when the bottom ash transport water is used in the FGD scrubber, for any electric generating unit with a total nameplate generating capacity of more than 50 megawatts and that is not an oil-fired unit, there shall be no discharge of pollutants in bottom ash transport water. This standard applies to the discharge of bottom ash transport water generated on and after November 1, 2018. Whenever bottom ash transport water is used in any other plant process or is sent to a treatment system at the plant (except when it is used in the FGD scrubber), the resulting effluent must comply with the discharge standard in this paragraph. When the bottom ash transport water is used in the FGD scrubber, the quantity of pollutants in bottom ash transport water shall not exceed the quantity determined by multiplying the flow of bottom ash transport water times the concentration listed in the table in paragraph (e) of this section.

(h) *Flue gas mercury control wastewater.* For any electric generating unit with a total nameplate generating capacity of more than 50 megawatts and that is not an oil-fired unit, there shall be no discharge of pollutants in flue gas mercury control wastewater. This standard applies to the discharge of flue gas mercury control wastewater generated on and after November 1, 2018. Whenever flue gas mercury control wastewater is used in any other plant process or is sent to a treatment system at the plant, the resulting effluent must comply with the discharge standard in this paragraph.

(i) *Gasification wastewater.* For any electric generating unit with a total nameplate generating capacity of more than 50 megawatts and that is not an oil-fired unit, the quantity of pollutants in gasification wastewater shall not exceed the quantity determined by multiplying the flow of gasification wastewater times the concentration listed

in the table following this paragraph (i). Dischargers must meet the standards in this paragraph by November 1, 2018. These standards apply to the discharge of gasification wastewater generated on and after November 1, 2018.

Pollutant or pollutant property	PSES	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Arsenic, total (µg/L)	4	.....
Mercury, total (ng/L)	1.8	1.3
Selenium, total (µg/L)	453	227
Total dissolved solids (mg/L)	38	22

§ 423.17 Pretreatment standards for new sources (PSNS).

(a) *1982 PSNS.* Except as provided in 40 CFR 403.7, any new source as of October 14, 1980, subject to paragraph (a) of this section, which introduces pollutants into a publicly owned treatment works, must comply with 40 CFR part 403, the following pretreatment standards for new sources, and the PSES in § 423.16, established on November 3, 2015. In the case of conflict, the more stringent standards apply:

(1) *PCBs.* There shall be no discharge of polychlorinated biphenyl compounds such as those used for transformer fluid.

(2) *Chemical metal cleaning wastes.* The pollutants discharged in chemical metal cleaning wastes shall not exceed the concentration listed in the following table:

Pollutant or pollutant property	PSNS
	Maximum for 1 day (mg/L)
Copper, total	1.0

(3) [Reserved]

(4) (i) *Cooling tower blowdown.* The pollutants discharged in cooling tower blowdown shall not exceed the concentration listed in the following table:

Pollutant or pollutant property	PSNS
	Maximum for any time (mg/l)
The 126 priority pollutants (appendix A) contained in chemicals added for cooling tower maintenance, except:	([1])
Chromium, total	0.2
Zinc, total	1.0

[1] No detectable amount.

(ii) At the permitting authority's discretion, instead of the monitoring in 40 CFR 122.11(b), compliance with the standards for the 126 priority pollutants in paragraph (a)(4)(i) of this section may be determined by engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR part 136.

(5) *Fly ash transport water.* There shall be no discharge of wastewater pollutants from fly ash transport water.

(b) *2015 PSNS.* Except as provided in 40 CFR 403.7, any new source as of June 7, 2013, subject to this paragraph (b), which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and the following pretreatment standards for new sources:

(1) *PCBs.* There shall be no discharge of polychlorinated biphenyl compounds such as those used for transformer fluid.

(2) *Chemical metal cleaning wastes.* The pollutants discharged in chemical metal cleaning wastes shall not exceed the concentration listed in the following table:

Pollutant or pollutant property	PSNS
	Maximum for 1 day (mg/L)
Copper, total	1.0

(3) [Reserved]

(4) (i) *Cooling tower blowdown.* The pollutants discharged in cooling tower blowdown shall not exceed the concentration listed in the following table:

Pollutant or pollutant property	PSNS
	Maximum for any time (mg/l)
The 126 priority pollutants (appendix A) contained in chemicals added for cooling tower maintenance, except:	([1])
Chromium, total	0.2
Zinc, total	1.0

[1] No detectable amount.

(ii) At the permitting authority's discretion, instead of the monitoring in 40 CFR 122.11(b), compliance with the standards for the 126 priority pollutants in paragraph (b)(4)(i) of this section may be determined by engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR part 136.

(5) *Fly ash transport* water. There shall be no discharge of pollutants in fly ash transport water. Whenever fly ash transport water is used in any other plant process or is sent to a treatment system at the plant, the resulting effluent must comply with the discharge standard in this paragraph.

(6) *FGD wastewater.* The quantity of pollutants discharged in FGD wastewater shall not exceed the quantity determined by multiplying the flow of FGD wastewater times the concentration listed in the following table:

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Arsenic, total (µg/L)	4	.....
Mercury, total (ng/L)	39	24
Selenium, total (µg/L)	5	.....
TDS (mg/L)	50	24

(7) *Flue gas mercury control wastewater.* There shall be no discharge of pollutants in flue gas mercury control wastewater. Whenever flue gas mercury control wastewater is used in any other plant process or is sent to a treatment system at the plant, the resulting effluent must comply with the discharge standard in this paragraph.

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(8) *Bottom ash transport water.* There shall be no discharge of pollutants in bottom ash transport water. Whenever bottom ash transport water is used in any other plant process or is sent to a treatment system at the plant, the resulting effluent must comply with the discharge standard in this paragraph.

(9) *Gasification wastewater.* The quantity of pollutants discharged in gasification wastewater shall not exceed the quantity determined by multiplying the flow of gasification wastewater times the concentration listed in the following table:

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Arsenic, total (μg/L)	4	.....
Mercury, total (ng/L)	1.8	1.3
Selenium, total (μg/L)	453	227
Total dissolved solids (mg/L)	38	22

(10) *Combustion residual leachate.* The quantity of pollutants discharged in combustion residual leachate shall not exceed the quantity determined by multiplying the flow of combustion residual leachate times the concentration listed in the following table:

Pollutant or pollutant property	PSNS	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Arsenic, total (μg/L)	11	8
Mercury, total (ng/L)	788	356

APPENDIX A TO PART 423—126 PRIORITY POLLUTANTS
001 Acenaphthene
002 Acrolein
003 Acrylonitrile
004 Benzene
005 Benzidine
006 Carbon tetrachloride (tetrachloromethane)
007 Chlorobenzene
008 1,2,4-trichlorobenzene
009 Hexachlorobenzene
010 1,2-dichloroethane
011 1,1,1-trichloreothane
012 Hexachloroethane
013 1,1-dichloroethane
014 1,1,2-trichloroethane
015 1,1,2,2-tetrachloroethane
016 Chloroethane
018 Bis(2-chloroethyl) ether
019 2-chloroethyl vinyl ether (mixed)
020 2-chloronaphthalene
021 2,4, 6-trichlorophenol
022 Parachlorometa cresol
023 Chloroform (trichloromethane)
024 2-chlorophenol
025 1,2-dichlorobenzene
026 1,3-dichlorobenzene
027 1,4-dichlorobenzene

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028 3,3-dichlorobenzidine
029 1,1-dichloroethylene
030 1,2-trans-dichloroethylene
031 2,4-dichlorophenol
032 1,2-dichloropropane
033 1,2-dichloropropylene (1,3-dichloropropene)
034 2,4-dimethylphenol
035 2,4-dinitrotoluene
036 2,6-dinitrotoluene
037 1,2-diphenylhydrazine
038 Ethylbenzene
039 Fluoranthene
040 4-chlorophenyl phenyl ether
041 4-bromophenyl phenyl ether
042 Bis(2-chloroisopropyl) ether
043 Bis(2-chloroethoxy) methane
044 Methylene chloride (dichloromethane)
045 Methyl chloride (dichloromethane)
046 Methyl bromide (bromomethane)
047 Bromoform (tribromomethane)
048 Dichlorobromomethane
051 Chlorodibromomethane
052 Hexachlorobutadiene
053 Hexachloromyclopentadiene
054 Isophorone
055 Naphthalene
056 Nitrobenzene
057 2-nitrophenol
058 4-nitrophenol
059 2,4-dinitrophenol
060 4,6-dinitro-o-cresol
061 N-nitrosodimethylamine
062 N-nitrosodiphenylamine
063 N-nitrosodi-n-propylamin
064 Pentachlorophenol
065 Phenol
066 Bis(2-ethylhexyl) phthalate
067 Butyl benzyl phthalate
068 Di-N-Butyl Phthalate
069 Di-n-octyl phthalate
070 Diethyl Phthalate
071 Dimethyl phthalate
072 1,2-benzanthracene (benzo(a) anthracene
073 Benzo(a)pyrene (3,4-benzo-pyrene)
074 3,4-Benzofluoranthene (benzo(b) fluoranthene)
075 11,12-benzofluoranthene (benzo(b) fluoranthene)
076 Chrysene
077 Acenaphthylene
078 Anthracene
079 1,12-benzoperylene (benzo(ghi) perylene)
080 Fluorene
081 Phenanthrene
082 1,2,5,6-dibenzanthracene (dibenzo(,h) anthracene)
083 Indeno (,1,2,3-cd) pyrene (2,3-opheynylene pyrene)
084 Pyrene
085 Tetrachloroethylene
086 Toluene
087 Trichloroethylene
088 Vinyl chloride (chloroethylene)
089 Aldrin

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090 Dieldrin
091 Chlordane (technical mixture and metabolites)
092 4,4-DDT
093 4,4-DDE (p,p-DDX)
094 4,4-DDD (p,p-TDE)\
095 Alpha-endosulfan
096 Beta-endosulfan
097 Endosulfan sulfate
098 Endrin
099 Endrin aldehyde
100 Heptachlor
101 Heptachlor epoxide (BHChexachlorocyclohexane)
102 Alpha-BHC
103 Beta-BHC
104 Gamma-BHC (lindane)
105 Delta-BHC (PCB-polychlorinated biphenyls)
106 PCB–1242 (Arochlor 1242)
107 PCB–1254 (Arochlor 1254)
108 PCB–1221 (Arochlor 1221)
109 PCB–1232 (Arochlor 1232)
110 PCB–1248 (Arochlor 1248)
111 PCB–1260 (Arochlor 1260)
112 PCB–1016 (Arochlor 1016)
113 Toxaphene
114 Antimony
115 Arsenic
116 Asbestos
117 Beryllium
118 Cadmium
119 Chromium
120 Copper
121 Cyanide, Total
122 Lead
123 Mercury
124 Nickel
125 Selenium
126 Silver
127 Thallium
126 Silver
128 Zinc
129 2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD)

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Water Division

Subject: **Guidance Memo No. 14-2011**
Nutrient Monitoring for "Nonsignificant" Discharges to the Chesapeake Bay Watershed

To: Regional Directors

From: Melanie D. Davenport, Director

Date: August 8, 2014

Copies: Deputy Regional Directors, Regional Water Permit Managers, James Golden and Fred Cunningham

Summary:
The purpose of this guidance is to establish standard nutrient monitoring conditions in individual VPDES permits in order to develop data necessary to reevaluate the aggregate "nonsignificant" point source wasteload allocations included in the Chesapeake Bay TMDL. This data may also be used to establish the permitted design capacity for expanding industrial dischargers in the Chesapeake Bay watershed.

Electronic Copy:
An electronic copy of this guidance in PDF format is available for staff internally on DEQNET, and for the general public on DEQ's website on the Water Permit Guidance web page.

Contact Information:
Please contact Allan Brockenbrough, Office of VPDES Permits, at (804) 698-4147 or allan.brockenbrough@deq.virginia.gov with any questions regarding the application of this guidance.

Disclaimer:

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate or prohibit any particular action not otherwise required or prohibited by law or regulation. If alternative proposals are made, such proposals will be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

Guidance memo No. 14-2011
Nutrient Monitoring for "Nonsignificant" Dischargers to the Chesapeake Bay Watershed

Background and Purpose

The purpose of this guidance is to establish standard nutrient monitoring conditions in individual VPDES permits in order to develop data necessary to reevaluate the Virginia point source wasteload allocations (WLAs) included in the Chesapeake Bay TMDL. The December 2010 Chesapeake Bay TMDL includes individual WLAs for all "significant" dischargers in the Bay watershed (with the exception of aggregate Chlorophyll-a based WLAs in the James River Basin). "Significant" dischargers in the Virginia portion of the Bay watershed are defined under the Nutrient Trading Watershed General Permit Regulation (9 VAC 25-820):

> *"Significant discharger" means (i) a sewage treatment works discharging to the Chesapeake Bay watershed upstream of the fall line with a design capacity of 0.5 million gallons per day or greater, or an equivalent load discharged from industrial facilities; (ii) a sewage treatment works discharging to the Chesapeake Bay watershed downstream of the fall line with a design capacity of 0.1 million gallons per day or greater, or an equivalent load discharged from industrial facilities; (iii) a planned or newly expanding sewage treatment works discharging to the Chesapeake Bay watershed upstream of the fall line that is expected to be in operation by December 31, 2010, with a permitted design of 0.5 million gallons per day or greater, or an equivalent load to be discharged from industrial facilities; or (iv) a planned or newly expanding sewage treatment works discharging to the Chesapeake Bay watershed downstream of the fall line that is expected to be in operation by December 31, 2010, with a design capacity of 0.1 million gallons per day or greater, or an equivalent load to be discharged from industrial facilities.*

All dischargers that do not meet this definition are deemed "nonsignificant" dischargers and were included in aggregate WLAs in the TMDL. Numeric WLAs are included in the watershed general permit for all significant dischargers and new or expanding nonsignificant dischargers that meet the criteria included in Part I.G. of the general permit. In keeping with Virginia's Phase I Watershed Implementation Plan (November 29, 2010), compliance with individual numeric WLAs is not required of existing nonsignificant facilities until they expand and trigger the nutrient offset requirements included in the watershed general permit. The nutrient monitoring required by this guidance is intended to provide additional data for the reevaluation of WLAs for nonsignificant facilities. For expanding nonsignificant industrial facilities it will also serve to establish the appropriate "permitted design capacity" for the existing treatment system.

Affected Permitted Discharges

The monitoring requirements contained in this guidance apply to all "nonsignificant" dischargers in the Chesapeake Bay watershed that are not actively monitoring and reporting under the watershed general permit unless they are an industrial discharger that has previously demonstrated through monitoring or by characterizing the nature of the discharge that they are not a source of a net Total Phosphorous (TP) or Total Nitrogen (TN) load. Examples of industrial discharges not expected to be a source of net TP or TN loads include the following if

they make no use of chemical additives containing nitrogen or phosphorous compounds - noncontact cooling water, water treatment plants, quarries not using blasting agents and concrete plants.

The data developed from the monitoring requirements contained in this guidance are intended to provide information for the reevaluation of the aggregate nonsignificant WLAs in the Chesapeake Bay TMDL. It is therefore not the intent of this guidance to require nutrient monitoring of nonsignificant facilities beyond a single permit term.

Discharges other than Industrial Stormwater

Monitoring Requirements

Individual VPDES permits for all affected dischargers (as defined in the previous section) should include annual nutrient monitoring (concentration only) for a single permit term as follows:

Parameter	Parameter Code	Frequency
Total Phosphorous	012	1/Year
TKN	068	1/Year
Nitrite + Nitrate	389	1/Year
Total Nitrogen[1]	013	1/Year
TSS	004	1/Year (if not previously characterized)

The sample type for TP, TKN, Nitrite+Nitrate and TSS (if appropriate) should be consistent with the most stringent sample type used for any other parameter in the VPDES permit (excluding flow). The sample type for TN should be "Calc". Additionally, the effluent limits page should include the following footnote for TN:

> [1] Total Nitrogen, which is the sum of TKN and Nitrite + Nitrate, shall be derived from the results of those tests.

Compliance Reporting Special Condition

The following language should be added to the standard municipal or industrial Compliance Reporting special condition.

> *For Total Phosphorus, all daily concentration data below the quantification level (QL) for the analytical method used should be treated as half the QL. All daily concentration data equal to or above the QL for the analytical method used shall be treated as it is reported.*
>
> *For Total Nitrogen (TN), if none of the daily concentration data for the respective species (i.e., TKN, Nitrates/Nitrites) are equal to or above the QL for the respective analytical methods used, the daily TN concentration value reported shall equal one half of the largest QL used for the respective species. If one of the data is equal to or above the QL, the daily TN concentration value shall be treated as that data point is reported. If more than one of*

the data is above the QL, the daily TN concentration value shall equal the sum of the data points as reported.

Specific QLs are not recommended in this guidance however dischargers of wastestreams expected to be low in nutrients should be made aware of the above reporting requirements and encouraged to use lower level QLs.

Fact Sheet Language

The Fact Sheet Basis for Effluent Limitations Table should include "BPJ" for the nutrient monitoring requirements with the following narrative rationale:

Nutrient Monitoring Requirements
Nonsignificant dischargers are subject to aggregate wasteload allocations for Total Nitrogen (TN), Total Phosphorous (TP) and Sediments under the Total Maximum Daily Load (TMDL) for Chesapeake Bay. Monitoring of TN, TP and TSS is required in order to verify the aggregate wasteload allocations.

Discharges of Industrial Stormwater

Individual VPDES permits for industrial stormwater should contain permit requirements consistent with the VPDES Industrial Stormwater General Permit (9 VAC 25-151-70). This includes semi-annual nutrient monitoring for the first two years of the permit for a total of four samples.

Parameter	Parameter Code	Frequency
Total Phosphorous	012	1/6 Months for 2 Years
TKN	068	1/6 Months for 2 Years
Nitrite + Nitrate	389	1/6 Months for 2 Years
Total Nitrogen[1]	013	1/6 Months for 2 Years
TSS	004	1/6 Months for 2 Years (if not previously characterized)

[1] Total Nitrogen, which is the sum of TKN and Nitrite + Nitrate, shall be derived from the results of those tests.

Note that due to the difficulty in accurately quantifying stormwater loads and the aggregate nature of the TMDL WLAs, it is not DEQ's intent to place numeric limitations in industrial stormwater permits. This guidance follows the approach used under the industrial stormwater general permit in which sampling results are compared to aggregate TDML loading values and additional practices are implemented under a TMDL action plan if necessary.

The following special condition should be substituted for Part I.B.7 of the general permit. Parts I.B.8 through I.B.9 of the general permit, also addressing requirements of the Chesapeake Bay

TMDL, should be included in the individual VPDES permit as well. (**Notes:** References to specific permit sections in bold font below refer to either the VPDES Industrial Stormwater General Permit (9 VAC 25-151-70) or the individual permit special condition. References to the individual permit special condition are designated by the use of *"of this subsection"*. **All references should be changed to cite the corresponding condition in the individual VPDES permit or the condition below should be modified if there is no corresponding condition in the individual VPDES permit.** Guidance provided herein is specific to the monitoring of nutrients for nonsignificant dischargers in the Chesapeake Bay watershed. The industrial stormwater general permit and associated guidance memorandum as well as the Permit Manual should be consulted for all other provisions not specifically related to nutrients monitoring.)

Special Condition for Discharges of Industrial Stormwater

7. Discharges of industrial stormwater to waters subject to TMDL wasteload allocations.

a. **(Include this special condition for stormwater discharges containing a pollutant of concern for which a TMDL wasteload allocation has been approved prior to permit issuance. Delete 7.a. and renumber the subsequent sections if the discharge is not subject to a local TMDL)**

*The permittee shall incorporate measures and controls into the SWPPP required by **Part III** that are consistent with the assumptions and requirements of the total maximum daily load (TMDL) for **(name of water body)**. The facility's SWPPP shall specifically address any conditions or requirements included in the TMDL that are applicable to discharges from the facility. If the TMDL establishes a specific numeric wasteload allocation that applies to discharges from the facility, the owner shall perform any required monitoring in accordance with **Part I.A.1.c (3)**, and implement control measures designed to meet that allocation.*

b. Facilities in the Chesapeake Bay watershed.

*(1) Owners of facilities in the Chesapeake Bay watershed shall monitor their industrial stormwater discharges for total suspended solids (TSS), total nitrogen (TN), and total phosphorus (TP) to characterize the contributions from their facility's specific industrial sector for these parameters. Samples shall be collected during each of the first four monitoring periods (i.e., the first two years of permit coverage). Monitoring periods are specified in **Part I.A.2**. Samples shall be collected and analyzed in accordance with **Part I.A.2**. Monitoring results shall be reported in accordance with **Part I.A.5** and **Part II.C**, and retained in accordance with **Part II.B**.*

(2) Chesapeake Bay TMDL wasteload allocations and Chesapeake Bay TMDL action plans.

(a) EPA's Chesapeake Bay TMDL (December 29, 2010) includes wasteload allocations for VPDES permitted industrial stormwater facilities as part of the regulated stormwater aggregate load. EPA used data submitted by Virginia with the Phase I Chesapeake Bay TMDL Watershed Implementation Plan, including the number of industrial stormwater permits per county and the number of urban acres regulated by industrial stormwater permits, as part of their development of the aggregate load. Aggregate loads for industrial stormwater facilities were appropriate because

actual facility loading data were not available to develop individual facility wasteload allocations.

Virginia estimated the loadings from industrial stormwater facilities using actual and estimated facility acreage information, and TP, TN, and TSS loading values from the Northern Virginia Planning District Commission (NVPDC) Guidebook for Screening Urban Nonpoint Pollution Management Strategies, prepared for the Metropolitan Washington Council of Governments. Annandale, VA. November, 1979. The loading values used were as follows:

TP - High (80%) imperviousness industrial; 1.5 lb/ac/yr
TN - High (80%) imperviousness industrial; 12.3 lb/ac/yr
TSS - High (80%) imperviousness industrial; 440 lb/ac/yr

The actual facility area information, and the TP, TN and TSS data collected for this permit will be used by DEQ to quantify the nutrient and sediment loads from VPDES permitted industrial stormwater facilities, and will be submitted to EPA to aid them in further refinements to their Chesapeake Bay TMDL model. The loading information will also be used by DEQ to determine any additional load reductions needed for industrial stormwater facilities for the next reissuance of this permit.

*(b) Data analysis and Chesapeake Bay TMDL action plans. The permittee shall analyze the nutrient and sediment data collected in accordance with subdivision **7.b.(1) of this subsection** to determine if additional action is needed for this permit term. The permittee shall average the data collected at the facility for each of the pollutants of concern (POC) (e.g., TP, TN and TSS) and compare the results to the loading values for TP, TN and TSS presented in subdivision **7.b.(2)(a) of this subsection.** To calculate the facility loadings, the permittee shall use either the actual annual average rainfall data for the facility location (in inches/year) or the Virginia annual average rainfall of 44.3 inches/year.*

The following formula or a site specific, DEQ-approved calculation shall be used to determine the loading value:

$$L = 0.226 \times R \times C \qquad \textit{Equation (1)}$$

where:

L = the Pollutant of Concern (POC) loading value (lb/acre/year)
C = the POC average concentration of all facility samples (mg/L)
0.226 = unit conversion factor
R = annual runoff (in/yr), calculated as: $R = P \times P_j \times R_v$
where:

P = annual rainfall (in/yr) [*use the Virginia annual average of 44.3 in/yr, or site specific annual rainfall for your area of the State*]
P_j = the fraction of annual events that produce runoff (usually 0.9)
R_v = the runoff coefficient, which can be expressed as: $R_v = 0.05 + (0.9 \times I_a)$

I_a = the impervious fraction [*the ratio of facility impervious area to the total facility area*]
or, I_a = AREAIMPERVIOUS / AREATOTAL

Substituting in Equation (1):

$$L = 0.226 \times P \times P_j \times (0.05 + (0.9 \times I_a)) \times C \quad \textit{Equation (2)}$$

(c) If the calculated facility loading value for TP, TN or TSS is less than the corresponding loading value presented in subdivision 7.b.(2)(a) of this subsection, then the calculations demonstrating that no reduction is necessary ***shall be submitted within 90 days from the end of the second year's monitoring period****. The calculations shall include a site map with the total site area, the areas associated with industrial activity and the total impervious area.*

If the calculated facility loading value for TP, TN or TSS exceeds the corresponding loading value presented in subdivision 7.b.(2)(a) of this subsection, then the permittee shall develop and submit a Chesapeake Bay TMDL Action Plan to DEQ for review and approval The plan shall include a site map with the total site area, the areas associated with industrial activity and the total impervious area. The permittee shall implement the applicable elements of the approved plan over the remaining term of this permit and achieve all the necessary reductions by June 30, 2024. . ***The plan shall be submitted within 90 days from the end of the second year's monitoring period****. The action plan shall include:*

(i) A determination of the total pollutant load reductions for TP, TN and TSS (as appropriate) necessary to reduce the annual loads from industrial activities. This shall be determined by calculating the difference between the loading values listed in subdivision 7.b.(2)(a) of this subsection, and the average of the sampling data for TP, TN or TSS (as appropriate) for the entire facility. The reduction applies to the total difference calculated for each pollutant of concern;

(ii) The means and methods, such as management practices and retrofit programs, that will be utilized to meet the required reductions determined in subdivision 7.b.(2)(c)(i) of this subsection, and a schedule to achieve those reductions by June 30, 2024. The schedule should include annual benchmarks to demonstrate the ongoing progress in meeting those reductions;

(iii) The permittee may consider utilization of any pollutant trading or offset program in accordance with §§ 62.1-44.19:20 through 62.1-44.19:23 of the Code of Virginia, governing trading and offsetting, to meet the required reductions.

(d) Permittees required to develop and implement a Chesapeake Bay TMDL Action Plan shall submit an annual report to the department by June 30th of each year describing the progress in meeting the required reductions.

A TMDL Action Plan special condition has been added to CEDS and should be used to track the required submittal of either a TMDL Action Plan or calculations demonstrating that no Plan is required for each of the three parameters of concern.

Fact Sheet Language

The Fact Sheet Basis for Effluent Limitations Table should include "BPJ" for the nutrient monitoring requirements with the following narrative rationale:

> *Nutrient Monitoring Requirements*
> *Nonsignificant dischargers are subject to aggregate wasteload allocations for Total Nitrogen (TN), Total Phosphorous (TP) and Sediments under the Total Maximum Daily Load (TMDL) for Chesapeake Bay. Monitoring of TN and TP is required in order to verify the aggregate wasteload allocations.*

SALTWATER AND TRANSITION ZONES
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Dominion CEC 002
Receiving Stream: S. Elizabeth River

Permit No.: VA0004081

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO3) =		mg/l
90th % Temperature (Annual) =	28.3	(° C)
90th % Temperature (Winter) =		(° C)
90th % Maximum pH =	7.5	
10th % Maximum pH =	7.05	
Tier Designation (1 or 2) =	1	
Early Life Stages Present Y/N =	Y	
Tidal Zone =	1	(1 = saltwater, 2 = transition zone)
Mean Salinity =	16.8	(g/kg)

Mixing Information

Design Flow (MGD)	
Acute WLA multiplier	2
Chronic WLA multiplier	50
Human health WLA multiplier	50

Effluent Information

Mean Hardness (as CaCO3) =		mg/L
90 % Temperature (Annual) =		(° C)
90 % Temperature (Winter) =		(° C)
90 % Maximum pH =		SU
10 % Maximum pH =		SU
Discharge Flow =		MGD

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
Acenapthene	0	–	–	9.9E+02	–	–	5.0E+04	–	–	–	–	–	–	–	–	5.0E+04
Acrolein	0	–	–	9.3E+00	–	–	4.7E+02	–	–	–	–	–	–	–	–	4.7E+02
Acrylonitrile[C]	0	–	–	2.5E+00	–	–	1.3E+02	–	–	–	–	–	–	–	–	1.3E+02
Aldrin [C]	0	1.3E+00	–	5.0E-04	2.6E+00	–	2.5E-02	–	–	–	–	–	–	2.6E+00	–	2.6E-02
Ammonia-N (mg/l) - Annual	0	3.99E+08	9.17E+05	–	7.98E+08	4.59E+07	–	–	–	–	–	–	–	7.98E+08	4.59E+07	–
Ammonia-N (mg/l) - Winter	0	1.15E+09	7.26E+06	–	2.29E+09	3.63E+08	–	–	–	–	–	–	–	2.29E+09	3.63E+08	–
Anthracene	0	–	–	4.0E+04	–	–	2.0E+06	–	–	–	–	–	–	–	–	2.0E+06
Antimony	0	–	–	6.4E+02	–	–	3.2E+04	–	–	–	–	–	–	–	–	3.2E+04
Arsenic	0	6.9E+01	3.6E+01	–	1.4E+02	1.8E+03	–	–	–	–	–	–	–	1.4E+02	1.8E+03	–
Benzene [C]	0	–	–	5.1E+02	–	–	2.6E+04	–	–	–	–	–	–	–	–	2.6E+04
Benzidine[C]	0	–	–	2.0E-03	–	–	1.0E-01	–	–	–	–	–	–	–	–	1.0E-01
Benzo (a) anthracene [C]	0	–	–	1.8E-01	–	–	9.0E+00	–	–	–	–	–	–	–	–	9.0E+00
Benzo (b) fluoranthene [C]	0	–	–	1.8E-01	–	–	9.0E+00	–	–	–	–	–	–	–	–	9.0E+00
Benzo (k) fluoranthene [C]	0	–	–	1.8E-01	–	–	9.0E+00	–	–	–	–	–	–	–	–	9.0E+00
Benzo (a) pyrene [C]	0	–	–	1.8E-01	–	–	9.0E+00	–	–	–	–	–	–	–	–	9.0E+00
Bis2-Chloroethyl Ether[C]	0	–	–	5.3E+00	–	–	2.7E+02	–	–	–	–	–	–	–	–	2.7E+02
Bis2-Chloroisopropyl Ether	0	–	–	6.5E+04	–	–	3.3E+06	–	–	–	–	–	–	–	–	3.3E+06
Bis2-Ethylhexyl Phthalate[C]	0	–	–	2.2E+01	–	–	1.1E+03	–	–	–	–	–	–	–	–	1.1E+03
Bromoform [C]	0	–	–	1.4E+03	–	–	7.0E+04	–	–	–	–	–	–	–	–	7.0E+04
Butylbenzylphthalate	0	–	–	1.9E+03	–	–	9.5E+04	–	–	–	–	–	–	–	–	9.5E+04
Cadmium	0	4.0E+01	8.8E+00	–	8.0E+01	4.4E+02	–	–	–	–	–	–	–	8.0E+01	4.4E+02	–
Carbon Tetrachloride [C]	0	–	–	1.6E+01	–	–	8.0E+02	–	–	–	–	–	–	–	–	8.0E+02
Chlordane [C]	0	9.0E-02	4.0E-03	8.1E-03	1.8E-01	2.0E-01	4.1E-01	–	–	–	–	–	–	1.8E-01	2.0E-01	4.1E-01

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
TRC	0			–			–	–	–	–	–	–	–	–	–	–
Chlorine Prod. Oxidant	0	1.3E+01	7.5E+00	–	2.6E+01	3.8E+02	–	–	–	–	–	–	–	2.6E+01	3.8E+02	–
Chlorobenzene	0	–	–	1.6E+03	–	–	8.0E+04	–	–	–	–	–	–	–	–	8.0E+04
Chlorodibromomethane[C]	0	–	–	1.3E+02	–	–	6.5E+03	–	–	–	–	–	–	–	–	6.5E+03
Chloroform	0	–	–	1.1E+04	–	–	5.5E+05	–	–	–	–	–	–	–	–	5.5E+05
2-Chloronaphthalene	0	–	–	1.6E+03	–	–	8.0E+04	–	–	–	–	–	–	–	–	8.0E+04
2-Chlorophenol	0	–	–	1.5E+02	–	–	7.5E+03	–	–	–	–	–	–	–	–	7.5E+03
Chlorpyrifos	0	1.1E-02	5.6E-03	–	2.2E-02	2.8E-01	–	–	–	–	–	–	–	2.2E-02	2.8E-01	–
Chromium III	0			–			–	–	–	–	–	–	–	–	–	–
Chromium VI	0	1.1E+03	5.0E+01	–	2.2E+03	2.5E+03	–	–	–	–	–	–	–	2.2E+03	2.5E+03	–
Chrysene[C]	0	–	–	1.8E-02	–	–	9.0E-01	–	–	–	–	–	–	–	–	9.0E-01
Copper	0	1.63E+01	1.05E+01	–	3.3E+01	5.3E+02	–	–	–	–	–	–	–	3.3E+01	5.3E+02	–
Cyanide, Free	0	1.0E+00	1.0E+00	1.6E+04	2.0E+00	5.0E+01	8.0E+05	–	–	–	–	–	–	2.0E+00	5.0E+01	8.0E+05
DDD[C]	0	–	–	3.1E-03	–	–	1.6E-01	–	–	–	–	–	–	–	–	1.6E-01
DDE[C]	0	–	–	2.2E-03	–	–	1.1E-01	–	–	–	–	–	–	–	–	1.1E-01
DDT[C]	0	1.3E-01	1.0E-03	2.2E-03	2.6E-01	5.0E-02	1.1E-01	–	–	–	–	–	–	2.6E-01	5.0E-02	1.1E-01
Demeton	0	–	1.0E-01	–	–	5.0E+00	–	–	–	–	–	–	–	–	5.0E+00	–
Diazinon	0	8.2E-01	8.2E-01	–	1.6E+00	4.1E+01	–	–	–	–	–	–	–	1.6E+00	4.1E+01	–
Dibenz(a,h)anthracene[C]	0	–	–	1.8E-01	–	–	9.0E+00	–	–	–	–	–	–	–	–	9.0E+00
1,2-Dichlorobenzene	0	–	–	1.3E+03	–	–	6.5E+04	–	–	–	–	–	–	–	–	6.5E+04
1,3-Dichlorobenzene	0	–	–	9.6E+02	–	–	4.8E+04	–	–	–	–	–	–	–	–	4.8E+04
1,4-Dichlorobenzene	0	–	–	1.9E+02	–	–	9.5E+03	–	–	–	–	–	–	–	–	9.5E+03
3,3-Dichlorobenzidine[C]	0	–	–	2.8E-01	–	–	1.4E+01	–	–	–	–	–	–	–	–	1.4E+01
Dichlorobromomethane[C]	0	–	–	1.7E+02	–	–	8.5E+03	–	–	–	–	–	–	–	–	8.5E+03
1,2-Dichloroethane[C]	0	–	–	3.7E+02	–	–	1.9E+04	–	–	–	–	–	–	–	–	1.9E+04
1,1-Dichloroethylene	0	–	–	7.1E+03	–	–	3.6E+05	–	–	–	–	–	–	–	–	3.6E+05
1,2-trans-dichloroethylene	0	–	–	1.0E+04	–	–	5.0E+05	–	–	–	–	–	–	–	–	5.0E+05
2,4-Dichlorophenol	0	–	–	2.9E+02	–	–	1.5E+04	–	–	–	–	–	–	–	–	1.5E+04
1,2-Dichloropropane[C]	0	–	–	1.5E+02	–	–	7.5E+03	–	–	–	–	–	–	–	–	7.5E+03
1,3-Dichloropropene[C]	0	–	–	2.1E+02	–	–	1.1E+04	–	–	–	–	–	–	–	–	1.1E+04
Dieldrin[C]	0	7.1E-01	1.9E-03	5.4E-04	1.4E+00	9.5E-02	2.7E-02	–	–	–	–	–	–	1.4E+00	9.5E-02	2.7E-02
Diethyl Phthalate	0	–	–	4.4E+04	–	–	2.2E+06	–	–	–	–	–	–	–	–	2.2E+06
2,4-Dimethylphenol	0	–	–	8.5E+02	–	–	4.3E+04	–	–	–	–	–	–	–	–	4.3E+04
Dimethyl Phthalate	0	–	–	1.1E+06	–	–	5.5E+07	–	–	–	–	–	–	–	–	5.5E+07
Di-n-Butyl Phthalate	0	–	–	4.5E+03	–	–	2.3E+05	–	–	–	–	–	–	–	–	2.3E+05
2,4 Dinitrophenol	0	–	–	5.3E+03	–	–	2.7E+05	–	–	–	–	–	–	–	–	2.7E+05
2-Methyl-4,6-Dinitrophenol	0	–	–	2.8E+02	–	–	1.4E+04	–	–	–	–	–	–	–	–	1.4E+04
2,4-Dinitrotoluene[C]	0	–	–	3.4E+01	–	–	1.7E+03	–	–	–	–	–	–	–	–	1.7E+03
Dioxin 2,3,7,8-tetrachlorodibenzo-p-dioxin	0	–	–	5.1E-08	–	–	2.6E-06	–	–	–	–	–	–	–	–	2.6E-06
1,2-Diphenylhydrazine[C]	0	–	–	2.0E+00	–	–	1.0E+02	–	–	–	–	–	–	–	–	1.0E+02
Alpha-Endosulfan	0	3.4E-02	8.7E-03	8.9E+01	6.8E-02	4.4E-01	4.5E+03	–	–	–	–	–	–	6.8E-02	4.4E-01	4.5E+03

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
Beta-Endosulfan	0	3.4E-02	8.7E-03	8.9E+01	6.8E-02	4.4E-01	4.5E+03	–	–	–	–	–	–	6.8E-02	4.4E-01	4.5E+03
Alpha + Beta Endosulfan	0	3.4E-02	8.7E-03	–	6.8E-02	4.4E-01	–	–	–	–	–	–	–	6.8E-02	4.4E-01	–
Endosulfan Sulfate	0	–	–	8.9E+01	–	–	4.5E+03	–	–	–	–	–	–	–	–	4.5E+03
Endrin	0	3.7E-02	2.3E-03	6.0E-02	7.4E-02	1.2E-01	3.0E+00	–	–	–	–	–	–	7.4E-02	1.2E-01	3.0E+00
Endrin Aldehyde	0	–	–	3.0E-01	–	–	1.5E+01	–	–	–	–	–	–	–	–	1.5E+01
Ethylbenzene	0	–	–	2.1E+03	–	–	1.1E+05	–	–	–	–	–	–	–	–	1.1E+05
Fluoranthene	0	–	–	1.4E+02	–	–	7.0E+03	–	–	–	–	–	–	–	–	7.0E+03
Fluorene	0	–	–	5.3E+03	–	–	2.7E+05	–	–	–	–	–	–	–	–	2.7E+05
Guthion	0	–	1.0E-02	–	–	5.0E-01	–	–	–	–	–	–	–	–	5.0E-01	–
Heptachlor [C]	0	5.3E-02	3.6E-03	7.9E-04	1.1E-01	1.8E-01	4.0E-02	–	–	–	–	–	–	1.1E-01	1.8E-01	4.0E-02
Heptachlor Epoxide [C]	0	5.3E-02	3.6E-03	3.9E-04	1.1E-01	1.8E-01	2.0E-02	–	–	–	–	–	–	1.1E-01	1.8E-01	2.0E-02
Hexachlorobenzene [C]	0	–	–	2.9E-03	–	–	1.5E-01	–	–	–	–	–	–	–	–	1.5E-01
Hexachlorobutadiene [C]	0	–	–	1.8E+02	–	–	9.0E+03	–	–	–	–	–	–	–	–	9.0E+03
Hexachlorocyclohexane Alpha-BHC [C]	0	–	–	4.9E-02	–	–	2.5E+00	–	–	–	–	–	–	–	–	2.5E+00
Hexachlorocyclohexane Beta-BHC [C]	0	–	–	1.7E-01	–	–	8.5E+00	–	–	–	–	–	–	–	–	8.5E+00
Hexachlorocyclohexane Gamma-BHC [C] (Lindane)	0	1.6E-01	–	1.8E+00	3.2E-01	–	9.0E+01	–	–	–	–	–	–	3.2E-01	–	9.0E+01
Hexachlorocyclopentadiene	0	–	–	1.1E+03	–	–	5.5E+04	–	–	–	–	–	–	–	–	5.5E+04
Hexachloroethane [C]	0	–	–	3.3E+01	–	–	1.7E+03	–	–	–	–	–	–	–	–	1.7E+03
Hydrogen Sulfide	0	–	2.0E+00	–	–	1.0E+02	–	–	–	–	–	–	–	–	1.0E+02	–
Indeno (1,2,3-cd) pyrene C	0	–	–	1.8E-01	–	–	9.0E+00	–	–	–	–	–	–	–	–	9.0E+00
Isophorone [C]	0	–	–	9.6E+03	–	–	4.8E+05	–	–	–	–	–	–	–	–	4.8E+05
Kepone	0	–	0.0E+00	–	–	0.0E+00	–	–	–	–	–	–	–	–	0.0E+00	–
Lead	0	2.4E+02	9.3E+00	–	4.8E+02	4.7E+02	–	–	–	–	–	–	–	4.8E+02	4.7E+02	–
Malathion	0	–	1.0E-01	–	–	5.0E+00	–	–	–	–	–	–	–	–	5.0E+00	–
Mercury	0	1.8E+00	9.4E-01	–	3.6E+00	4.7E+01	–	–	–	–	–	–	–	3.6E+00	4.7E+01	–
Methyl Bromide	0	–	–	1.5E+03	–	–	7.5E+04	–	–	–	–	–	–	–	–	7.5E+04
Methylene Chloride [C]	0	–	–	5.9E+03	–	–	3.0E+05	–	–	–	–	–	–	–	–	3.0E+05
Methoxychlor	0	–	3.0E-02	–	–	1.5E+00	–	–	–	–	–	–	–	–	1.5E+00	–
Mirex	0	–	0.0E+00	–	–	0.0E+00	–	–	–	–	–	–	–	–	0.0E+00	–
Nickel	0	7.4E+01	8.2E+00	4.6E+03	1.5E+02	4.1E+02	2.3E+05	–	–	–	–	–	–	1.5E+02	4.1E+02	2.3E+05
Nitrobenzene	0	–	–	6.9E+02	–	–	3.5E+04	–	–	–	–	–	–	–	–	3.5E+04
N-Nitrosodimethylamine [C]	0	–	–	3.0E+01	–	–	1.5E+03	–	–	–	–	–	–	–	–	1.5E+03
N-Nitrosodiphenylamine [C]	0	–	–	6.0E+01	–	–	3.0E+03	–	–	–	–	–	–	–	–	3.0E+03
N-Nitrosodi-n-propylamine [C]	0	–	–	5.1E+00	–	–	2.6E+02	–	–	–	–	–	–	–	–	2.6E+02
Nonylphenol	0	7.0E+00	1.7E+00	–	1.4E+01	8.5E+01	–	–	–	–	–	–	–	1.4E+01	8.5E+01	–
Parathion	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
PCB Total [C]	0	–	3.0E-02	6.4E-04	–	1.5E+00	3.2E-02	–	–	–	–	–	–	–	1.5E+00	3.2E-02
Pentachlorophenol [C]	0	1.3E+01	7.9E+00	3.0E+01	2.6E+01	4.0E+02	1.5E+03	–	–	–	–	–	–	2.6E+01	4.0E+02	1.5E+03

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
Phenol	0	–	–	8.6E+05	–	–	4.3E+07	–	–	–	–	–	–	–	–	4.3E+07
Phosphorus (Elemental)	0	–	1.0E-01	–	–	5.0E+00	–	–	–	–	–	–	–	–	5.0E+00	–
Pyrene	0	–	–	4.0E+03	–	–	2.0E+05	–	–	–	–	–	–	–	–	2.0E+05
Selenium	0	2.9E+02	7.1E+01	4.2E+03	5.8E+02	3.6E+03	2.1E+05	–	–	–	–	–	–	5.8E+02	3.6E+03	2.1E+05
Silver	0	1.9E+00	–	–	3.8E+00	–	–	–	–	–	–	–	–	3.8E+00	–	–
1,1,2,2-Tetrachloroethane[C]	0	–	–	4.0E+01	–	–	2.0E+03	–	–	–	–	–	–	–	–	2.0E+03
Tetrachloroethylene[C]	0	–	–	3.3E+01	–	–	1.7E+03	–	–	–	–	–	–	–	–	1.7E+03
Thallium	0	–	–	4.7E-01	–	–	2.4E+01	–	–	–	–	–	–	–	–	2.4E+01
Toluene	0	–	–	6.0E+03	–	–	3.0E+05	–	–	–	–	–	–	–	–	3.0E+05
Toxaphene [C]	0	2.1E-01	2.0E-04	2.8E-03	4.2E-01	1.0E-02	1.4E-01	–	–	–	–	–	–	4.2E-01	1.0E-02	1.4E-01
Tributyltin	0	4.2E-01	7.4E-03	–	8.4E-01	3.7E-01	–	–	–	–	–	–	–	8.4E-01	3.7E-01	–
1,2,4-Trichlorobenzene	0	–	–	7.0E+01	–	–	3.5E+03	–	–	–	–	–	–	–	–	3.5E+03
1,1,2-Trichloroethane[C]	0	–	–	1.6E+02	–	–	8.0E+03	–	–	–	–	–	–	–	–	8.0E+03
Trichloroethylene [C]	0	–	–	3.0E+02	–	–	1.5E+04	–	–	–	–	–	–	–	–	1.5E+04
2,4,6-Trichlorophenol [C]	0	–	–	2.4E+01	–	–	1.2E+03	–	–	–	–	–	–	–	–	1.2E+03
Vinyl Chloride[C]	0	–	–	2.4E+01	–	–	1.2E+03	–	–	–	–	–	–	–	–	1.2E+03
Zinc	0	9.0E+01	8.1E+01	2.6E+04	1.8E+02	4.1E+03	1.3E+06	–	–	–	–	–	–	1.8E+02	4.1E+03	1.3E+06

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. For transition zone waters, spreadsheet prints the lesser of the freshwater and saltwater water quality criteria.
6. Regular WLA = (WQC x WLA multiplier) - (WLA multiplier - 1)(background conc.)
7. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
8. Antideg. WLA = (Antideg. Baseline)(WLA multiplier) - (WLA multiplier - 1)(background conc.)

Metal	Site Specific Target Value (SSTV)
Antimony	3.2E+04
Arsenic III	5.5E+01
Cadmium	3.2E+01
Chromium III	#VALUE!
Chromium VI	8.8E+02
Copper	1.3E+01
Lead	1.9E+02
Mercury	1.4E+00
Nickel	5.9E+01
Selenium	2.3E+02
Silver	1.5E+00
Zinc	7.2E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

Outfall 002

	Water Quality Standard Use Designation			Waste Load Allocation (WLA)				
Parameter	Saltwater Acute	Saltwater Chronic	QLs	2 x Acute for Saltwater Criterion	50 x Chronic for Saltwater or Human Health Criteria	Input data(ug/l)	Limit (Y/N)	Limit (ug/l)
Arsenic (ug/l)	69	36	55	138	1800	8	No	
Cadmium (ug/l)	40	8.8	32	80	440	3.5	No	
Chromium VI (ug/l)	1,100	50	880	2200	2500	1	No	
Copper (ug/l)	16.3	10.5	13	32.6	525	9	No	
Nickel (ug/l)	74	8.2	59	148	410	6	No	
Selenium (ug/l)	290	71	230	580	3550	5	No	
Lead (ug/l)	240	9.3	190	480	465	7	no	
Mercury (ug/l)	1.8	0.94	1.4	3.6	47	0	No	
Silver (ug/l)	1.9		1.5	3.8		0	No	
Zinc (ug/l)	90	81	72	180	4050	95, 114, 67	Yes	180

Note: Where samples were collected and reported as non detect or less than quantification level, the data was interpreted as a zero. Therefore STATS ananlyses were subsequently not warrented because the presumed absence of the pollutants in the effluent.

2/23/2016 9:21:06 AM

Facility = CEC 002
Chemical = Arsenic
Chronic averaging period = 4
WLAa = 138
WLAc = 1800
Q.L. = 55
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average =
97th percentile 30 day average=
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

8

2/23/2016 9:27:01 AM

Facility = CEC 002
Chemical = Cadmium
Chronic averaging period = 4
WLAa = 80
WLAc = 440
Q.L. = 32
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average =
97th percentile 30 day average=
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

3.5

2/24/2016 11:10:53 AM

Facility = CEC 002
Chemical = Chromium VI
Chronic averaging period = 4
WLAa = 2200
WLAc = 2500
Q.L. = 880
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average =
97th percentile 30 day average=
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

1

2/23/2016 9:28:47 AM

Facility = CEC 002
Chemical = Copper
Chronic averaging period = 4
WLAa = 32.6
WLAc = 525
Q.L. = 13
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average =
97th percentile 30 day average=
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

9

2/23/2016 9:29:45 AM

Facility = CEC 002
Chemical = Nickel
Chronic averaging period = 4
WLAa = 148
WLAc = 410
Q.L. = 59
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average =
97th percentile 30 day average=
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

6

2/23/2016 9:30:40 AM

Facility = CEC 002
Chemical = Selenium
Chronic averaging period = 4
WLAa = 580
WLAc = 3550
Q.L. = 230
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average =
97th percentile 30 day average=
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

5

2/23/2016 9:31:23 AM

Facility = CEC 002
Chemical = Lead
Chronic averaging period = 4
WLAa = 480
WLAc = 465
Q.L. = 190
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average =
97th percentile 30 day average=
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

7

2/23/2016 9:32:08 AM

Facility = CEC 002
Chemical = Mercury
Chronic averaging period = 4
WLAa = 3.6
WLAc = 47
Q.L. = 1.4
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average =
97th percentile 30 day average=
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

0

2/23/2016 9:32:49 AM

Facility = CEC 002
Chemical = Silver
Chronic averaging period = 4
WLAa = 3.8
WLAc =
Q.L. = 1.5
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average =
97th percentile 30 day average=
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

0

5/6/2016 3:50:37 PM

Facility = CEC 002
Chemical = Zinc
Chronic averaging period = 4
WLAa = 180
WLAc = 4050
Q.L. = 72
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 3
Expected Value = 107.161
Variance = 4134.10
C.V. = 0.6
97th percentile daily values = 260.769
97th percentile 4 day average = 178.294
97th percentile 30 day average= 129.242
< Q.L. = 1
Model used = BPJ Assumptions, Type 1 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 180
Average Weekly limit = 180
Average Monthly LImit = 180

The data are:

95
114
67

SALTWATER AND TRANSITION ZONES
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Dominion - CEC 207
Receiving Stream: Deep Creek to S. Elizabeth River

Permit No.: VA0004081

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO3) =		mg/l
90th % Temperature (Annual) =	28.3	(° C)
90th % Temperature (Winter) =		(° C)
90th % Maximum pH =	7.5	
10th % Maximum pH =	7.05	
Tier Designation (1 or 2) =	1	
Early Life Stages Present Y/N =	Y	
Tidal Zone =	1	(1 = saltwater, 2 = transition zone)
Mean Salinity =	16.8	(g/kg)

Mixing Information

Design Flow (MGD)	
Acute WLA multiplier	2
Chronic WLA multiplier	5
Human health WLA multiplier	5

Effluent Information

Mean Hardness (as CaCO3) =		mg/L
90 % Temperature (Annual) =		(° C)
90 % Temperature (Winter) =		(° C)
90 % Maximum pH =		SU
10 % Maximum pH =		SU
Discharge Flow =	0.094	MGD

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
Acenapthene	0	–	–	9.9E+02	–	–	5.0E+03	–	–	–	–	–	–	–	–	5.0E+03
Acrolein	0	–	–	9.3E+00	–	–	4.7E+01	–	–	–	–	–	–	–	–	4.7E+01
Acrylonitrile[C]	0	–	–	2.5E+00	–	–	1.3E+01	–	–	–	–	–	–	–	–	1.3E+01
Aldrin[C]	0	1.3E+00	–	5.0E-04	2.6E+00	–	2.5E-03	–	–	–	–	–	–	2.6E+00	–	2.5E-03
Ammonia-N (mg/l) - Annual	0	3.99E+08	1.31E+07	–	7.98E+08	6.57E+07	–	–	–	–	–	–	–	7.98E+08	6.57E+07	–
Ammonia-N (mg/l) - Winter	0	1.15E+09	7.12E+07	–	2.29E+09	3.56E+08	–	–	–	–	–	–	–	2.29E+09	3.56E+08	–
Anthracene	0	–	–	4.0E+04	–	–	2.0E+05	–	–	–	–	–	–	–	–	2.0E+05
Antimony	0	–	–	6.4E+02	–	–	3.2E+03	–	–	–	–	–	–	–	–	3.2E+03
Arsenic	0	6.9E+01	3.6E+01	–	1.4E+02	1.8E+02	–	–	–	–	–	–	–	1.4E+02	1.8E+02	–
Benzene[C]	0	–	–	5.1E+02	–	–	2.6E+03	–	–	–	–	–	–	–	–	2.6E+03
Benzidine[C]	0	–	–	2.0E-03	–	–	1.0E-02	–	–	–	–	–	–	–	–	1.0E-02
Benzo (a) anthracene[C]	0	–	–	1.8E-01	–	–	9.0E-01	–	–	–	–	–	–	–	–	9.0E-01
Benzo (b) fluoranthene[C]	0	–	–	1.8E-01	–	–	9.0E-01	–	–	–	–	–	–	–	–	9.0E-01
Benzo (k) fluoranthene[C]	0	–	–	1.8E-01	–	–	9.0E-01	–	–	–	–	–	–	–	–	9.0E-01
Benzo (a) pyrene[C]	0	–	–	1.8E-01	–	–	9.0E-01	–	–	–	–	–	–	–	–	9.0E-01
Bis2-Chloroethyl Ether[C]	0	–	–	5.3E+00	–	–	2.7E+01	–	–	–	–	–	–	–	–	2.7E+01
Bis2-Chloroisopropyl Ether	0	–	–	6.5E+04	–	–	3.3E+05	–	–	–	–	–	–	–	–	3.3E+05
Bis2-Ethylhexyl Phthalate[C]	0	–	–	2.2E+01	–	–	1.1E+02	–	–	–	–	–	–	–	–	1.1E+02
Bromoform[C]	0	–	–	1.4E+03	–	–	7.0E+03	–	–	–	–	–	–	–	–	7.0E+03
Butylbenzylphthalate	0	–	–	1.9E+03	–	–	9.6E+03	–	–	–	–	–	–	–	–	9.6E+03
Cadmium	0	4.0E+01	8.8E+00	–	8.0E+01	4.4E+01	–	–	–	–	–	–	–	8.0E+01	4.4E+01	–
Carbon Tetrachloride[C]	0	–	–	1.6E+01	–	–	8.0E+01	–	–	–	–	–	–	–	–	8.0E+01
Chlordane[C]	0	9.0E-02	4.0E-03	8.1E-03	1.8E-01	2.0E-02	4.1E-02	–	–	–	–	–	–	1.8E-01	2.0E-02	4.1E-02

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
TRC	0			–			–	–	–	–	–	–	–	–	–	–
Chlorine Prod. Oxidant	0	1.3E+01	7.5E+00	–	2.6E+01	3.8E+01	–	–	–	–	–	–	–	2.6E+01	3.8E+01	–
Chlorobenzene	0	–	–	1.6E+03	–	–	8.0E+03	–	–	–	–	–	–	–	–	8.0E+03
Chlorodibromomethane[C]	0	–	–	1.3E+02	–	–	6.5E+02	–	–	–	–	–	–	–	–	6.5E+02
Chloroform	0	–	–	1.1E+04	–	–	5.5E+04	–	–	–	–	–	–	–	–	5.5E+04
2-Chloronaphthalene	0	–	–	1.6E+03	–	–	8.0E+03	–	–	–	–	–	–	–	–	8.0E+03
2-Chlorophenol	0	–	–	1.5E+02	–	–	7.5E+02	–	–	–	–	–	–	–	–	7.5E+02
Chlorpyrifos	0	1.1E-02	5.6E-03	–	2.2E-02	2.8E-02	–	–	–	–	–	–	–	2.2E-02	2.8E-02	–
Chromium III	0			–			–	–	–	–	–	–	–	–	–	–
Chromium VI	0	1.1E+03	5.0E+01	–	2.2E+03	2.5E+02	–	–	–	–	–	–	–	2.2E+03	2.5E+02	–
Chrysene[C]	0	–	–	1.8E-02	–	–	9.0E-02	–	–	–	–	–	–	–	–	9.0E-02
Copper	0	1.63E+01	1.05E+01	–	3.3E+01	5.3E+01	–	–	–	–	–	–	–	3.3E+01	5.3E+01	–
Cyanide, Free	0	1.0E+00	1.0E+00	1.6E+04	2.0E+00	5.0E+00	8.0E+04	–	–	–	–	–	–	2.0E+00	5.0E+00	8.0E+04
DDD[C]	0	–	–	3.1E-03	–	–	1.6E-02	–	–	–	–	–	–	–	–	1.6E-02
DDE[C]	0	–	–	2.2E-03	–	–	1.1E-02	–	–	–	–	–	–	–	–	1.1E-02
DDT[C]	0	1.3E-01	1.0E-03	2.2E-03	2.6E-01	5.0E-03	1.1E-02	–	–	–	–	–	–	2.6E-01	5.0E-03	1.1E-02
Demeton	0	–	1.0E-01	–	–	5.0E-01	–	–	–	–	–	–	–	–	5.0E-01	–
Diazinon	0	8.2E-01	8.2E-01	–	1.6E+00	4.1E+00	–	–	–	–	–	–	–	1.6E+00	4.1E+00	–
Dibenz(a,h)anthracene[C]	0	–	–	1.8E-01	–	–	9.0E-01	–	–	–	–	–	–	–	–	9.0E-01
1,2-Dichlorobenzene	0	–	–	1.3E+03	–	–	6.5E+03	–	–	–	–	–	–	–	–	6.5E+03
1,3-Dichlorobenzene	0	–	–	9.6E+02	–	–	4.8E+03	–	–	–	–	–	–	–	–	4.8E+03
1,4-Dichlorobenzene	0	–	–	1.9E+02	–	–	9.5E+02	–	–	–	–	–	–	–	–	9.5E+02
3,3-Dichlorobenzidine[C]	0	–	–	2.8E-01	–	–	1.4E+00	–	–	–	–	–	–	–	–	1.4E+00
Dichlorobromomethane[C]	0	–	–	1.7E+02	–	–	8.5E+02	–	–	–	–	–	–	–	–	8.5E+02
1,2-Dichloroethane[C]	0	–	–	3.7E+02	–	–	1.9E+03	–	–	–	–	–	–	–	–	1.9E+03
1,1-Dichloroethylene	0	–	–	7.1E+03	–	–	3.6E+04	–	–	–	–	–	–	–	–	3.6E+04
1,2-trans-dichloroethylene	0	–	–	1.0E+04	–	–	5.0E+04	–	–	–	–	–	–	–	–	5.0E+04
2,4-Dichlorophenol	0	–	–	2.9E+02	–	–	1.5E+03	–	–	–	–	–	–	–	–	1.5E+03
1,2-Dichloropropane[C]	0	–	–	1.5E+02	–	–	7.5E+02	–	–	–	–	–	–	–	–	7.5E+02
1,3-Dichloropropene[C]	0	–	–	2.1E+02	–	–	1.1E+03	–	–	–	–	–	–	–	–	1.1E+03
Dieldrin[C]	0	7.1E-01	1.9E-03	5.4E-04	1.4E+00	9.5E-03	2.7E-03	–	–	–	–	–	–	1.4E+00	9.5E-03	2.7E-03
Diethyl Phthalate	0	–	–	4.4E+04	–	–	2.2E+05	–	–	–	–	–	–	–	–	2.2E+05
2,4-Dimethylphenol	0	–	–	8.6E+02	–	–	4.3E+03	–	–	–	–	–	–	–	–	4.3E+03
Dimethyl Phthalate	0	–	–	1.1E+06	–	–	5.5E+06	–	–	–	–	–	–	–	–	5.5E+06
Di-n-Butyl Phthalate	0	–	–	4.5E+03	–	–	2.3E+04	–	–	–	–	–	–	–	–	2.3E+04
2,4 Dinitrophenol	0	–	–	5.3E+03	–	–	2.7E+04	–	–	–	–	–	–	–	–	2.7E+04
2-Methyl-4,6-Dinitrophenol	0	–	–	2.8E+02	–	–	1.4E+03	–	–	–	–	–	–	–	–	1.4E+03
2,4-Dinitrotoluene[C]	0	–	–	3.4E+01	–	–	1.7E+02	–	–	–	–	–	–	–	–	1.7E+02
Dioxin 2,3,7,8-tetrachlorodibenzo-p-dioxin	0	–	–	5.1E-08	–	–	2.6E-07	–	–	–	–	–	–	–	–	2.6E-07
1,2-Diphenylhydrazine[C]	0	–	–	2.0E+00	–	–	1.0E+01	–	–	–	–	–	–	–	–	1.0E+01
Alpha-Endosulfan	0	3.4E-02	8.7E-03	8.9E+01	6.8E-02	4.4E-02	4.5E+02	–	–	–	–	–	–	6.8E-02	4.4E-02	4.5E+02

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
Beta-Endosulfan	0	3.4E-02	8.7E-03	8.9E+01	6.8E-02	4.4E-02	4.5E+02	--	--	--	--	--	--	6.8E-02	4.4E-02	4.5E+02
Alpha + Beta Endosulfan	0	3.4E-02	8.7E-03	--	6.8E-02	4.4E-02	--	--	--	--	--	--	--	6.8E-02	4.4E-02	--
Endosulfan Sulfate	0	--	--	8.9E+01	--	--	4.5E+02	--	--	--	--	--	--	--	--	4.5E+02
Endrin	0	3.7E-02	2.3E-03	6.0E-02	7.4E-02	1.2E-02	3.0E-01	--	--	--	--	--	--	7.4E-02	1.2E-02	3.0E-01
Endrin Aldehyde	0	--	--	3.0E-01	--	--	1.5E+00	--	--	--	--	--	--	--	--	1.5E+00
Ethylbenzene	0	--	--	2.1E+03	--	--	1.1E+04	--	--	--	--	--	--	--	--	1.1E+04
Fluoranthene	0	--	--	1.4E+02	--	--	7.0E+02	--	--	--	--	--	--	--	--	7.0E+02
Fluorene	0	--	--	5.3E+03	--	--	2.7E+04	--	--	--	--	--	--	--	--	2.7E+04
Guthion	0	--	1.0E-02	--	--	5.0E-02	--	--	--	--	--	--	--	--	5.0E-02	--
Heptachlor [C]	0	5.3E-02	3.6E-03	7.9E-04	1.1E-01	1.8E-02	4.0E-03	--	--	--	--	--	--	1.1E-01	1.8E-02	4.0E-03
Heptachlor Epoxide[C]	0	5.3E-02	3.6E-03	3.9E-04	1.1E-01	1.8E-02	2.0E-03	--	--	--	--	--	--	1.1E-01	1.8E-02	2.0E-03
Hexachlorobenzene[C]	0	--	--	2.9E-03	--	--	1.5E-02	--	--	--	--	--	--	--	--	1.5E-02
Hexachlorobutadiene[C]	0	--	--	1.8E+02	--	--	9.0E+02	--	--	--	--	--	--	--	--	9.0E+02
Hexachlorocyclohexane Alpha-BHC[C]	0	--	--	4.9E-02	--	--	2.5E-01	--	--	--	--	--	--	--	--	2.5E-01
Hexachlorocyclohexane Beta-BHC[C]	0	--	--	1.7E-01	--	--	8.5E-01	--	--	--	--	--	--	--	--	8.5E-01
Hexachlorocyclohexane Gamma-BHC[C] (Lindane)	0	1.6E-01	--	1.8E+00	3.2E-01	--	9.0E+00	--	--	--	--	--	--	3.2E-01	--	9.0E+00
Hexachlorocyclopentadiene	0	--	--	1.1E+03	--	--	5.5E+03	--	--	--	--	--	--	--	--	5.5E+03
Hexachloroethane[C]	0	--	--	3.3E+01	--	--	1.7E+02	--	--	--	--	--	--	--	--	1.7E+02
Hydrogen Sulfide	0	--	2.0E+00	--	--	1.0E+01	--	--	--	--	--	--	--	--	1.0E+01	--
Indeno (1,2,3-cd) pyrene C	0	--	--	1.8E-01	--	--	9.0E-01	--	--	--	--	--	--	--	--	9.0E-01
Isophorone[C]	0	--	--	9.6E+03	--	--	4.8E+04	--	--	--	--	--	--	--	--	4.8E+04
Kepone	0	--	0.0E+00	--	--	0.0E+00	--	--	--	--	--	--	--	--	0.0E+00	--
Lead	0	2.4E+02	9.3E+00	--	4.8E+02	4.7E+01	--	--	--	--	--	--	--	4.8E+02	4.7E+01	--
Malathion	0	--	1.0E-01	--	--	5.0E-01	--	--	--	--	--	--	--	--	5.0E-01	--
Mercury	0	1.8E+00	9.4E-01	--	3.6E+00	4.7E+00	--	--	--	--	--	--	--	3.6E+00	4.7E+00	--
Methyl Bromide	0	--	--	1.5E+03	--	--	7.5E+03	--	--	--	--	--	--	--	--	7.5E+03
Methylene Chloride [C]	0	--	--	5.9E+03	--	--	3.0E+04	--	--	--	--	--	--	--	--	3.0E+04
Methoxychlor	0	--	3.0E-02	--	--	1.5E-01	--	--	--	--	--	--	--	--	1.5E-01	--
Mirex	0	--	0.0E+00	--	--	0.0E+00	--	--	--	--	--	--	--	--	0.0E+00	--
Nickel	0	7.4E+01	8.2E+00	4.6E+03	1.5E+02	4.1E+01	2.3E+04	--	--	--	--	--	--	1.5E+02	4.1E+01	2.3E+04
Nitrobenzene	0	--	--	6.9E+02	--	--	3.5E+03	--	--	--	--	--	--	--	--	3.5E+03
N-Nitrosodimethylamine[C]	0	--	--	3.0E+01	--	--	1.5E+02	--	--	--	--	--	--	--	--	1.5E+02
N-Nitrosodiphenylamine[C]	0	--	--	6.0E+01	--	--	3.0E+02	--	--	--	--	--	--	--	--	3.0E+02
N-Nitrosodi-n-propylamine[C]	0	--	--	5.1E+00	--	--	2.6E+01	--	--	--	--	--	--	--	--	2.6E+01
Nonylphenol	0	7.0E+00	1.7E+00	--	1.4E+01	8.5E+00	--	--	--	--	--	--	--	1.4E+01	8.5E+00	--
Parathion	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB Total[C]	0	--	3.0E-02	6.4E-04	--	1.5E-01	3.2E-03	--	--	--	--	--	--	--	1.5E-01	3.2E-03
Pentachlorophenol [C]	0	1.3E+01	7.9E+00	3.0E+01	2.6E+01	4.0E+01	1.5E+02	--	--	--	--	--	--	2.6E+01	4.0E+01	1.5E+02

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
Phenol	0	–	–	8.6E+05	–	–	4.3E+06	–	–	–	–	–	–	–	–	4.3E+06
Phosphorus (Elemental)	0	–	1.0E-01	–	–	5.0E-01	–	–	–	–	–	–	–	–	5.0E-01	–
Pyrene	0	–	–	4.0E+03	–	–	2.0E+04	–	–	–	–	–	–	–	–	2.0E+04
Selenium	0	2.9E+02	7.1E+01	4.2E+03	5.8E+02	3.6E+02	2.1E+04	–	–	–	–	–	–	5.8E+02	3.6E+02	2.1E+04
Silver	0	1.9E+00	–	–	3.8E+00	–	–	–	–	–	–	–	–	3.8E+00	–	–
1,1,2,2-Tetrachloroethane[C]	0	–	–	4.0E+01	–	–	2.0E+02	–	–	–	–	–	–	–	–	2.0E+02
Tetrachloroethylene[C]	0	–	–	3.3E+01	–	–	1.7E+02	–	–	–	–	–	–	–	–	1.7E+02
Thallium	0	–	–	4.7E-01	–	–	2.4E+00	–	–	–	–	–	–	–	–	2.4E+00
Toluene	0	–	–	6.0E+03	–	–	3.0E+04	–	–	–	–	–	–	–	–	3.0E+04
Toxaphene [C]	0	2.1E-01	2.0E-04	2.8E-03	4.2E-01	1.0E-03	1.4E-02	–	–	–	–	–	–	4.2E-01	1.0E-03	1.4E-02
Tributyltin	0	4.2E-01	7.4E-03	–	8.4E-01	3.7E-02	–	–	–	–	–	–	–	8.4E-01	3.7E-02	–
1,2,4-Trichlorobenzene	0	–	–	7.0E+01	–	–	3.5E+02	–	–	–	–	–	–	–	–	3.5E+02
1,1,2-Trichloroethane[C]	0	–	–	1.6E+02	–	–	8.0E+02	–	–	–	–	–	–	–	–	8.0E+02
Trichloroethylene [C]	0	–	–	3.0E+02	–	–	1.5E+03	–	–	–	–	–	–	–	–	1.5E+03
2,4,6-Trichlorophenol [C]	0	–	–	2.4E+01	–	–	1.2E+02	–	–	–	–	–	–	–	–	1.2E+02
Vinyl Chloride[C]	0	–	–	2.4E+01	–	–	1.2E+02	–	–	–	–	–	–	–	–	1.2E+02
Zinc	0	9.0E+01	8.1E+01	2.6E+04	1.8E+02	4.1E+02	1.3E+05	–	–	–	–	–	–	1.8E+02	4.1E+02	1.3E+05

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. For transition zone waters, spreadsheet prints the lesser of the freshwater and saltwater water quality criteria.
6. Regular WLA = (WQC x WLA multiplier) - (WLA multiplier - 1)(background conc.)
7. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
8. Antideg. WLA = (Antideg. Baseline)(WLA multiplier) - (WLA multiplier - 1)(background conc.)

Metal	Site Specific Target Value (SSTV)
Antimony	3.2E+03
Arsenic III	5.5E+01
Cadmium	2.6E+01
Chromium III	#VALUE!
Chromium VI	1.5E+02
Copper	1.3E+01
Lead	2.8E+01
Mercury	1.4E+00
Nickel	2.5E+01
Selenium	2.1E+02
Silver	1.5E+00
Zinc	7.2E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

Outfall 207

Parameter	Water Quality Standard Use Designation				Waste Load Allocation (WLA)					
	Saltwater Acute	Saltwater Chronic	Human Health Criteria	QLs	2 x Acute for Saltwater Criterion	5 x Chronic for Saltwater or Human Health Criteria	Input data(ug/l)	Limit (Y/N)	Daily Max (ug/l)	Monthly Avg (ug/l)
Antimony (ug/l)			640			3200			3200	3200
Arsenic (ug/l)	69	36		55	138	180	180	Yes	138	75
Cadmium (ug/l)	40	8.8		26	80	44	80	Yes	64	35
Chromium VI (ug/l)	1,100	50		150	2200	250	250	Yes	366	199
Copper (ug/l)	16.3	10.5		13	32.6	52.5	32.6	Yes	33	18
Nickel (ug/l)	74	8.2		24	148	41	41	Yes	60	33
Selenium (ug/l)	290	71		210	580	355	355	Yes	519	283
Thallium (ug/l)			0.47			2.35	2.35	Yes	2.4	2.4
Lead (ug/l)	240	9.3		27	480	46.5	46.5	Yes	68	37
Mercury (ug/l)	1.8	0.94		1.4	3.6	4.7	3.6	Yes	3.6	2
Silver (ug/l)	1.9			1.5	3.8		3.8	Yes	3.8	2.1
Zinc (ug/l)	90	81		72	180	405	180	Yes	180	98

Note: Where samples were collected and reported as non detect or less than quantification level, the data was interpreted as a zero. Therefore STATS ananlyses were subsequently not warrented because the presumed absence of the pollutants in the effluent.

2/23/2016 9:42:48 AM

Facility = CEC 207
Chemical = Arsenic
Chronic averaging period = 4
WLAa = 138
WLAc = 180
Q.L. = 55
# samples/mo. = 12
# samples/wk. = 3

Summary of Statistics:

observations = 1
Expected Value = 138
Variance = 6855.84
C.V. = 0.6
97th percentile daily values = 335.811
97th percentile 4 day average = 229.603
97th percentile 30 day average= 166.435
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 138
Average Weekly limit = 100.93923058919
Average Monthly LImit = 75.1865335644781

The data are:

138

2/23/2016 9:44:59 AM

Facility = CEC 207
Chemical = Cadmium
Chronic averaging period = 4
WLAa = 80
WLAc = 44
Q.L. = 26
# samples/mo. = 12
# samples/wk. = 3

Summary of Statistics:

observations = 1
Expected Value = 80
Variance = 2304
C.V. = 0.6
97th percentile daily values = 194.673
97th percentile 4 day average = 133.103
97th percentile 30 day average= 96.4842
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 64.3532904983422
Average Weekly limit = 47.0708089042414
Average Monthly LImit = 35.0616002611465

The data are:

80

2/24/2016 11:12:21 AM

Facility = CEC 207
Chemical = Chromium VI
Chronic averaging period = 4
WLAa = 2200
WLAc = 250
Q.L. = 150
# samples/mo. = 12
# samples/wk. = 3

Summary of Statistics:

observations = 1
Expected Value = 250
Variance = 22500
C.V. = 0.6
97th percentile daily values = 608.354
97th percentile 4 day average = 415.947
97th percentile 30 day average= 301.513
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 365.643696013308
Average Weekly limit = 267.447777865008
Average Monthly LImit = 199.213637847423

The data are:

250

2/23/2016 9:48:07 AM

Facility = CEC 207
Chemical = Copper
Chronic averaging period = 4
WLAa = 32.6
WLAc = 52.5
Q.L. = 13
# samples/mo. = 12
# samples/wk. = 3

Summary of Statistics:

observations = 1
Expected Value = 32.6
Variance = 382.593
C.V. = 0.6
97th percentile daily values = 79.3294
97th percentile 4 day average = 54.2395
97th percentile 30 day average= 39.3173
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 32.6
Average Weekly limit = 23.8450646174464
Average Monthly LImit = 17.7614564797245

The data are:

32.6

5/6/2016 4:03:25 PM

Facility = CEC 207
Chemical = Nickel
Chronic averaging period = 4
WLAa = 148
WLAc = 41
Q.L. = 24
# samples/mo. = 12
# samples/wk. = 3

Summary of Statistics:

observations = 1
Expected Value = 41
Variance = 605.16
C.V. = 0.6
97th percentile daily values = 99.7701
97th percentile 4 day average = 68.2153
97th percentile 30 day average= 49.4481
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 59.9655661461825
Average Weekly limit = 43.8614355698613
Average Monthly LImit = 32.6710366069774

The data are:

41

2/23/2016 9:51:09 AM

Facility = CEC 207
Chemical = Selenium
Chronic averaging period = 4
WLAa = 580
WLAc = 355
Q.L. = 210
# samples/mo. = 12
# samples/wk. = 3

Summary of Statistics:

observations = 1
Expected Value = 355
Variance = 45369
C.V. = 0.6
97th percentile daily values = 863.863
97th percentile 4 day average = 590.645
97th percentile 30 day average= 428.148
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 519.214048338897
Average Weekly limit = 379.775844568311
Average Monthly LImit = 282.883365743341

The data are:

355

5/6/2016 4:04:34 PM

Facility = CEC 207
Chemical = Lead
Chronic averaging period = 4
WLAa = 480
WLAc = 46.5
Q.L. = 27
# samples/mo. = 12
# samples/wk. = 3

Summary of Statistics:

observations = 1
Expected Value = 46.5
Variance = 778.41
C.V. = 0.6
97th percentile daily values = 113.153
97th percentile 4 day average = 77.3662
97th percentile 30 day average= 56.0814
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 68.0097274584753
Average Weekly limit = 49.7452866828914
Average Monthly Limit = 37.0537366396207

The data are:

46.5

2/23/2016 9:53:06 AM

Facility = CEC 207
Chemical = Mercury
Chronic averaging period = 4
WLAa = 3.6
WLAc = 4.7
Q.L. = 1.4
# samples/mo. = 12
# samples/wk. = 3

Summary of Statistics:

observations = 1
Expected Value = 3.6
Variance = 4.6656
C.V. = 0.6
97th percentile daily values = 8.76030
97th percentile 4 day average = 5.98964
97th percentile 30 day average= 4.34179
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 3.6
Average Weekly limit = 2.63319731971801
Average Monthly LImit = 1.96138783211682

The data are:

3.6

2/23/2016 9:53:55 AM

Facility = CEC 207
Chemical = Silver
Chronic averaging period = 4
WLAa = 3.8
WLAc =
Q.L. = 1.5
# samples/mo. = 12
# samples/wk. = 3

Summary of Statistics:

observations = 1
Expected Value = 3.8
Variance = 5.1984
C.V. = 0.6
97th percentile daily values = 9.24698
97th percentile 4 day average = 6.32240
97th percentile 30 day average= 4.58300
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 3.8
Average Weekly limit = 2.77948605970234
Average Monthly LImit = 2.07035382278998

The data are:

3.8

2/23/2016 9:54:37 AM

Facility = CEC 207
Chemical = Zinc
Chronic averaging period = 4
WLAa = 180
WLAc = 405
Q.L. = 72
# samples/mo. = 12
# samples/wk. = 3

Summary of Statistics:

observations = 1
Expected Value = 180
Variance = 11664
C.V. = 0.6
97th percentile daily values = 438.015
97th percentile 4 day average = 299.482
97th percentile 30 day average= 217.089
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 180
Average Weekly limit = 131.6598659859
Average Monthly LImit = 98.069391605841

The data are:

180

Outfall 003

Parameter	Water Quality Standard Use Designation			Waste Load Allocation (WLA)				
	Saltwater Acute	Saltwater Chronic	QLs	2 x Acute for Saltwater Criterion	50 x Chronic for Saltwater	Input data(ug/l)	Limit (Y/N)	Limit (ug/l)
Arsenic (ug/l)	69	36	55	138	1800	3	No	
Cadmium (ug/l)	40	8.8	32	80	440	0	No	
Chromium VI (ug/l)	1,100	50	880	2200	2500	1	No	
Copper (ug/l)	16.3	10.5	13	32.6	525	See Below	NO	
Nickel (ug/l)	74	8.2	59	148	410	35	No	
Selenium (ug/l)	290	71	230	580	3550	3	No	
Lead (ug/l)	240	9.3	190	480	465	1	no	
Mercury (ug/l)	1.8	0.94	1.4	3.6	47	0	No	
Silver (ug/l)	1.9		1.5	3.8		0	No	
Zinc (ug/l)	90	81	72	180	4050	See Below	NO	

Note: Where samples were collected and reported as non detect or less than quantification level, the data was interpreted as a zero. Therefore STATS ananlyses were subsequently not warrented because the presumed absence of the pollutants in the effluent.

Copper data:
0,0,0,0,0,0,0,0,0,0,3,
73,12

Zinc data:
0,0,0,0,0,0,
0,52,1592,3
02

2/23/2016 1:35:30 PM

Facility = CEC 003
Chemical = Arsenic
Chronic averaging period = 4
WLAa = 138
WLAc = 1800
Q.L. = 55
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average = 139.701
97th percentile 30 day average= 101.267
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

3

2/24/2016 11:14:12 AM

Facility = CEC 003
Chemical = Chromium VI
Chronic averaging period = 4
WLAa = 2200
WLAc = 2500
Q.L. = 880
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average = 415.947
97th percentile 30 day average= 301.513
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

1

2/23/2016 1:36:18 PM

Facility = CEC 003
Chemical = Cadmium
Chronic averaging period = 4
WLAa = 80
WLAc = 440
Q.L. = 32
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average = 139.701
97th percentile 30 day average= 101.267
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

0

4/12/2016 1:47:04 PM

Facility = CEC 003
Chemical = Copper
Chronic averaging period = 30
WLAa = 32.6
WLAc = 525
Q.L. = 13
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 10
Expected Value = 7.44696
Variance = 19.9646
C.V. = 0.6
97th percentile daily values = 18.1215
97th percentile 4 day average = 12.3901
97th percentile 30 day average= 8.98143
< Q.L. = 9
Model used = BPJ Assumptions, Type 1 data

No Limit is required for this material

The data are:

0
0
0
0
0
0
0
3
73
12

2/23/2016 1:38:44 PM

Facility = CEC 003
Chemical = Nickel
Chronic averaging period = 4
WLAa = 148
WLAc = 410
Q.L. = 59
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average = 121.456
97th percentile 30 day average= 88.0418
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

35

2/23/2016 1:39:20 PM

Facility = CEC 003
Chemical = Selenium
Chronic averaging period = 4
WLAa = 580
WLAc = 3550
Q.L. = 230
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average = 121.456
97th percentile 30 day average= 88.0418
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

3

2/23/2016 1:40:51 PM

Facility = CEc 003
Chemical = Lead
Chronic averaging period = 4
WLAa = 480
WLAc = 465
Q.L. = 190
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average = 121.456
97th percentile 30 day average= 88.0418
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

1

2/23/2016 1:59:10 PM

Facility = CEC 003
Chemical = Mercury
Chronic averaging period = 4
WLAa = 3.6
WLAc = 47
Q.L. = 1.4
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average = 121.456
97th percentile 30 day average= 88.0418
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

0

2/23/2016 1:59:39 PM

Facility = CEC 003
Chemical = Silver
Chronic averaging period = 4
WLAa = 3.8
WLAc =
Q.L. = 1.5
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average = 121.456
97th percentile 30 day average= 88.0418
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

0

4/12/2016 1:49:52 PM

Facility = CEC 003
Chemical = Zinc
Chronic averaging period = 4
WLAa = 180
WLAc = 4050
Q.L. = 72
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 10
Expected Value = 52.6533
Variance = 998.055
C.V. = 0.6
97th percentile daily values = 128.127
97th percentile 4 day average = 87.6041
97th percentile 30 day average= 63.5027
< Q.L. = 8
Model used = BPJ Assumptions, Type 1 data

No Limit is required for this material

The data are:

0
0
0
0
0
0
0
52
1592
302

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ATTACHMENT 7

SPECIAL CONDITIONS RATIONALE

VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE

Name of Condition:

B. OTHER REQUIREMENTS OR SPECIAL CONDITIONS

1.a. Water Quality Standards Reopener

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of water quality criteria.

1.b. Total Maximum Daily Load (TMDL) Reopener

Rationale: For specified waters, Section 303(d) of the Clean Water Act requires the development of total maximum daily loads necessary to achieve the applicable water quality standards. The TMDL must take into account seasonal variations and a margin of safety. In addition, Section 62.1-44.19:7 of the State Water Control Law requires the development and implementation of plans to address impaired waters, including TMDLs. This condition allows for the permit to be either modified or, alternatively, revoked and reissued to incorporate the requirements of a TMDL once it is developed. In addition, the reopener recognizes that, in according to Section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan or other wasteload allocation prepared under Section 303 of the Act.

2. Operations & Maintenance (O & M)

Rationale: The State Water Control Law, Section 62.1-44.21 allows requests for any information necessary to determine the effect of the discharge on State waters. Section 401 of the Clean Water Act requires the permittee to provide opportunity for the state to review the proposed operations of the facility. In addition, 40 CFR 122.41 (e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) in order to achieve compliance with the permit (includes laboratory controls and QA/QC).

3. Notification Levels

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-200 and 40 CFR 122.42 (a) require notification of the discharge of certain parameters at or above specific concentrations for existing manufacturing, commercial mining and silvicultural discharges.

4. Quantification Levels Under Part I.A.

Rationale: States are authorized to establish monitoring methods and procedures to compile and analyze data on water quality, as per 40 CFR part 130, Water Quality Planning and Management, subpart 130.4. Section b. of the special condition defines QL and is included per PJ to clarify the difference between QL and MDL.

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5. Compliance Reporting Under Part I.A.

Rationale: Defines reporting requirements for toxic parameters and some conventional parameters with quantification levels to ensure consistent, accurate reporting on submitted reports.

6. Materials Handling and Storage

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-50 A., prohibits the discharge of any wastes into State waters unless authorized by permit. The State Water Control Law, Sec. 62.1-44.18:2, authorizes the Board to prohibit any waste discharge which would threaten public health or safety, interfere with or be incompatible with treatment works or water use. Section 301 of the Clean Water Act prohibits the discharge of any pollutant unless it complies with specific sections of the Act.

7. Minimum Freeboard

Rationale: Minimize the discharge of untreated wastewater to the groundwater or surface waters.

8. Surface Water Monitoring

Rationale: All surface water monitoring and reporting requirements, subsequent action requirements and conditions required per the Virginia Solid Waste Management Regulations (9VAC 20-81-10 *et seq.*) specific to this permitted facility shall be enforceable as part of this VPDES permit.

9. Nutrient Monitoring Requirements

Rationale: Nonsignificant dischargers are subject to aggregate wasteload allocations for Total Nitrogen (TN), Total Phosphorous (TP) and Sediments under the Total maximum Daily Load (TMDL) for Chesapeake Bay. Monitoring of TN and TP is required in order to verify the aggregate wasteload allocations.

10. Overflow of Untreated Coal Pile Runoff from a 10-Year/24-Hour Storm

Rationale: Federal Effluent Guidelines 40 CFR Part 423. The special condition language is as written in the previous and current permit.

11. Closure of the Bottom Ash Pond

Rationale: §62.1-44.21 requires every owner to furnish when requested plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. This special condition establishes the requirements for establishing and implementing plans and specifications for notification, monitoring, and closure of the Bottom Ash Pond to ensure the industrial site and treatment works are properly closed and the risk of untreated waste water discharge, spills, leaks and exposure to raw materials is minimized and water quality maintained.

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Additionally, the closure plan shall be modified or updated as necessary to be consistent with the requirements of the Virginia Solid Waste Management Regulations (VSWMR) and approved by the Department.

12. Polychlorinated Biphenyl (PCB) Compounds

Rationale: Federal Effluent Guidelines 40 CFR Part 423. The special condition language is as written in the previous permit.

13. Notification of Ash Pond Dewatering

Rationale: The permittee shall notify the DEQ Tidewater Regional Office at least 72 hours prior to the planned commencement of the discharge to draw down the water elevation in the Bottom Ash Pond and or to lower the water table in preparation of pond closure. A second notification to the DEQ Tidewater Regional Office shall be provided within 24 hours of initiating the discharge to draw down the water elevation and or the lowering of the water table in the Bottom Ash Pond. The State Water Control Law §62.1-44.21 authorizes the board to request information needed to determine the discharge's impact to State Waters.

14. Ash Pond Closure Stormwater Management

Rationale: Best Management Practices (BMPs), structural and/or non-structural, shall be utilized by the permittee to minimize the impact of ash pond closure activities on stormwater quality. The facility's Stormwater Pollution Prevention Plann (SWPPP) shall include a description of the BMP's being implemented and a regular schedule for preventive maintenance of all BMPs where appropriate. All structural BMPs identified in the SWPPP shall be maintained in effective operation condition and shall be inspected for structural integrity and operational efficiency once per week during ash pond closure activities. Results of the weekly inspection and actions needed and performed in response to the weekly inspections shall be documented per the SWPPP. The State Water Control Law §62.1-44.21 authorizes the board to request information needed to determine the discharge's impact to State Waters.

15. Cease Discharge Requirement for Internal Outfall 207

Rationale: This condition is included to ensure that any discharge from closure activities that exceeds established effluent limitations is ceased as soon as possible once the exceedance(s) is discovered. §62.1-44.15.8.a grants the Board authority to "issue special orders to owners who are permitting or causing pollution (as defined by §62.1-44.3) of state waters to cease and desist." §62.1-44.5 prohibits discharges except in compliance with the permit. 9VAC25-31-210 allows on a case-by-case basis any conditions required to assure compliance with applicable requirements of the law, the CWA, and the regulations. Because the characterization of the discharge during closure activities cannot be fully known in advance, it is appropriate to include this condition to protect water quality.

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16. Drawdown Rate Requirement

Rationale: This condition has been included to limit the drawdown rate of the pond in an effort to reduce the risk of dam stability issues during drawdown. The drawdown limit was developed based on recommendations from DCR's Dam Safety Program.

17. Conceptual Engineering Report (CER) Requirement (Internal Outfall 207)

Rationale: Section 62.1-44.16 of the Code of Virginia requires industrial facilities to obtain DEQ approval for proposed discharges of industrial wastewater. A CER means a document setting forth preliminary concepts for basic information for the design of industrial wastewater treatment facilities and the supporting calculations for sizing the treatment operations.

18. Ash Pond Decanting/Dewatering Enhanced Treatment and Reporting

Rationale: Section 62.1-44.21 requires every owner to furnish when requested plans, specification, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. This special condition establishes enhanced treatment requirements for the wastewater associated with the closure of the Bottom Ash Pond. It also establishes monitoring and reporting requirements in accordance with 9VAC25-31-220 I to ensure compliance with the condition is maintained.

C. Whole Effluent Toxicity Program (WET)

Rationale: To determine the need for pollutant specific and/or whole effluent toxicity limits as may be required by the VPDES Permit Regulation, 9 VAC 25-31-220 D. and 40 CFR 122.44 (d). See Attachment 9 of this fact sheet for additional justification.

D. STORM WATER MANAGEMENT CONDITIONS

1. Sampling Methodology for Specific Outfalls 011, 012, 016, 017

Rationale: Defines methodology for collecting representative effluent samples in conformance with applicable regulations.

2. Storm Water Management Evaluation

Rationale: The Clean Water Act 402(p) (2) (B) requires permits for storm water discharges associated with industrial activity. VPDES permits for storm water discharges must establish BAT/BCT requirements in accordance with 402(p)(3) of the Act. The Storm Water Pollution Prevention Plan is the vehicle proposed by EPA in the final NPDES General Permits for Storm Water Discharges Associated with Industrial Activity (Federal Register Sept 9, 1992) to meet the requirements of the Act. Additionally, the VPDES Permit Regulation, 9 VAC 25-31-220 K., and 40 CFR 122.44 (k) allow BMPs for the control of toxic pollutants listed in Section 307 (a)(1), and

hazardous substances listed in Section 311 of the Clean Water Act where numeric limits are infeasible or BMPs are needed to accomplish the purpose/intent of the law.

Finally, the EPA produced a document dated August 1, 1996, entitled "Interim Permitting Approach for Water Quality- Effluent Limitations in Storm Water Permits". This document indicated that an interim approach to limiting storm water could be through the use of best management practices rather than numerical limits. EPA pointed out that Section 502 of the Clean Water Act (CWA) defined "effluent limitation" to mean "any restriction on quantities, rates, and concentrations of constituents discharged from point sources. The CWA does not say that effluent limitations need be numeric." The use of BMPs falls in line with the Clean Water Act which notes the need to control these discharges to the maximum extent necessary to mitigate impacts on water quality.

3. General Storm Water Conditions

a. Sample Type

Rationale: This stipulates the proper sampling methodology for qualifying rain events from regulated storm water outfalls. Use of this condition is a PJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

b. Recording of Results

Rationale: This sets forth the information which must be recorded and reported for each storm event sampling (ie. date and duration event, rainfall measurement, and duration between qualifying events). It also requires the maintenance of daily rainfall logs which are to be reported. This condition is carried over from the previous storm water pollution prevention plan requirements contained in the EPA storm water baseline industrial general permit.

c. Sampling Waiver

Rationale: This condition allows the permittee to collect substitute samples of qualifying storm events in the event of adverse climatic conditions. Use of this condition is a PJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

d. Representative Discharge

Rationale: This condition allows the permittee to submit the results of sampling from one outfall as representative of other similar outfalls, provided the permittee can demonstrate that the outfalls are substantially identical. Use of this condition is a PJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

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e. Quarterly Visual Examination of Storm Water Quality

Rationale: This condition requires that visual examinations of storm water outfalls take place at a specified frequency and sets forth what information needs to be checked and documented. These examinations assist with the evaluation of the pollution prevention plan by providing a simple, low cost means of assessing the quality of storm water discharge with immediate feedback. Use of this condition is a PJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

f. Releases of Hazardous Substances or Oil in Excess of Reportable Quantities

Rationale: This condition requires that the discharge of hazardous substances or oil from a facility be eliminated or minimized in accordance with the facility's storm water pollution prevention plan. If there is a discharge of a material in excess of a reportable quantity, it establishes the reporting requirements in accordance with state laws and federal regulations. In addition, the pollution prevention plan for the facility must be reviewed and revised as necessary to prevent a reoccurrence of the spill. Use of this condition is a PJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

g. Allowable Non-Storm Water Discharges

Rationale: The listed allowable non-storm water discharges are the same as those allowed by the EPA in their multi-sector general permit, and are the same non-storm water discharges allowed under the Virginia General VPDES Permit for Discharges of Storm Water Associated with Industrial Activity, 9 VAC 25-151-10 et seq. Allowing the same non-storm water discharges in VPDES individual permits provides consistency with other storm water permits for industrial facilities. The non-storm water discharges must meet the conditions in the permit.

4. Storm Water Pollution Prevention Plan

Rationale: The Clean Water Act 402(p) (2) (B) requires permits for storm water discharges associated with industrial activity. VPDES permits for storm water discharges must establish BAT/BCT requirements in accordance with 402(p)(3) of the Act. The Storm Water Pollution Prevention Plan is the vehicle proposed by EPA in the final NPDES General Permits for Storm Water Discharges Associated with Industrial Activity (Federal Register Sept 9, 1992) to meet the requirements of the Act. Additionally, the VPDES Permit Regulation, 9 VAC 25-31-220 K., and 40 CFR 122.44 (k) allow BMPs for the control of toxic pollutants listed in Section 307 (a)(1), and hazardous substances listed in Section 311 of the Clean Water Act where numeric limits are infeasible or BMPs are needed to accomplish the purpose/intent of the law.

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5. Facility-specific Storm Water Management Conditions

Rationale: These conditions set forth additional site-specific storm water pollution prevention plan requirements. Use of these conditions is a PJ determination based on the EPA storm water multi-sector general permit for industrial activities and DEQ's general permit for storm water associated with industrial activities and is consistent with those permits.

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ATTACHMENT 8

WHOLE EFFLUENT TOXICITY MONITORING AND WET LIMIT RATIONALE

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MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard — Virginia Beach, VA 23462

SUBJECT: TMP language for Dominion Virginia Power Chesapeake Plant (VA0004081)

TO: Melinda Woodruff

FROM: Deanna Austin

DATE: 9/14/15

COPIES:

Dominion Virginia Power-Chesapeake Plant is requesting a permit modification based on the ceasing of operations at the Chesapeake, VA location. The facility is in the process of closing down process operations, causing outfalls to be eliminated or altered. The outfalls that are eliminated or altered can be removed from whole effluent toxicity monitoring. For this modification, outfalls 001 and 030 are affected and therefore, toxicity monitoring will be removed for these outfalls. Outfall 002 has had changes to the activities that drain to this area, including the drainage of the decommissioning activities. Because of this, it is recommended that the facility perform toxicity testing quarterly at outfall 002 for the remainder of the permit term. This will allow the facility to help determine how changes to the site are impacting the discharges. The proposed permit language is attached to this memo.

The following toxicity language is recommended for Dominion-Chesapeake VA0004081.

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C. Whole Effluent Toxicity Program (WET)

1. Biological Monitoring for Outfall 002 and 003

a. In accordance with the schedule in E.2.below, the permittee shall conduct quarterly toxicity tests for outfall 002 and annual toxicity tests for outfall 003 for the duration of the permit.
The permittee shall collect a 24 hour flow proportional sample for WET testing of final effluent from outfall 002 in accordance with the sampling methodology in Part I.A. of this permit. The grab samples for toxicity testing shall be taken at the same time as the monitoring for the outfall 002 and the internal outfall 207 in accordance with Part 1.A. of this permit. Quarterly acute and chronic tests shall be conducted for outfall 002. The tests to use are:

48 Hour Static Acute test using Americamysis bahia

Chronic Static Renewal 7-day Survival, Growth and Fecundity Test with Americamysis bahia

The permittee shall collect a 24-hour flow proportioned composite sample for WET testing of final effluent from outfall 003 in accordance with the sampling methodology in Part I.A. and I.D.1. of this permit.
The grab sample for toxicity testing shall be taken at the same time as the monitoring for the outfall in Part I.A. of this permit. Annual acute tests shall be conducted for outfall 003. The acute test to use is:

48 Hour Static Acute test using Americamysis bahia

b. The acute tests shall be performed with a minimum of 5 dilutions, derived geometrically, for the calculation of a valid LC_{50}. Express the results as TU_a (Acute Toxic Units) by dividing 100/ LC_{50} for reporting.

The chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions, derived geometrically) to determine the "No Observed Effect Concentration" (NOEC) for survival, growth and fecundity. Results which cannot be quantified (i.e., a "less than" NOEC value) are not acceptable, and a retest will have to be performed. Express the test NOEC as TU_c (Chronic Toxic Units), by dividing 100/NOEC for reporting. Report the LC50 at 48 hours and the IC25 with the NOEC's in the test report.

Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

c. In the event that sampling of any of the outfalls is not possible due to the absence of effluent flow during a particular testing period, the permittee shall perform a make-up sample during the next testing period.

d. The permittee may provide additional samples to address data variability during the period of initial data generation. These data shall be reported and may be included in the evaluation of the effluent toxicity. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

e. The test dilutions shall be able to determine compliance with the following endpoints:

(1) Acute $LC_{50} \geq 100\%$ equivalent to a $TU_a \leq 1.0$

(2) Chronic NOEC of 100% equivalent to a TU_c of 1.0

f. The test data will be evaluated by STATS.EXE for reasonable potential at the conclusion of the test period. The data may be evaluated sooner if requested by the permittee, or if toxicity has been noted. Should evaluation of the data indicate that a limit is needed, a WET limit and compliance schedule will be required and the toxicity tests of 1.a. may be discontinued.

g. The permit may be modified or revoked and reissued to include pollutant specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. The pollutant specific limits must control the toxicity of the effluent.

2. Reporting Schedule for Outfall 002 and 003

The permittee shall report the results and supply **one** complete copy of the toxicity test reports to the Tidewater Regional Office in accordance with the schedule below. A complete report must contain a copy of all laboratory benchsheets, certificates of analysis, and all chains of custody. **Attachment A** must be submitted with each complete report. All data shall be submitted within 60 days of the sample date.

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(a)	Conduct annual WET test for outfall 003 using *Americamysis bahia*	By December 31, 2016
(b)	Submit results of all biological tests	Within 60 days of the sample date and no later than January 10, 2017
(c)	Conduct quarterly WET test for outfall 002 using *Americamysis bahia*	By December 31, 2016
(d)	Submit results of quarterly test	By January 10, 2017

DRAFT

MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard Virginia Beach, VA 23462

SUBJECT: TMP language Addition for Dominion Virginia Power Chesapeake Plant (VA0004081)

TO: Melinda Woodruff

FROM: Deanna Austin

DATE: 11/16/15

COPIES:

In keeping with State wide consistency toxicity limits will be added to the internal discharge of dewatering (outfall 207). The calculation of limits was done using the WETLIM10 DEQ program and the results are attached. Limits will be 100% NOAEC for Acute and 1.44 TUc for Chronic. Sampling will be monthly using two species for salt water.

The following toxicity language is recommended for Dominion-Chesapeake VA0004081.

DRAFT

C. Whole Effluent Toxicity Program (WET)

ADD THIS AT THE END OF SECTION, ADD OUTFALL TO TMP SUBMITTAL COVER SHEET

3. WET Limit for Interim Internal Outfall 207

a. The Whole Effluent Toxicity (WET) limitations as set forth in Part I.A and within this section shall be effective immediately upon initiation of the discharge at Interim Internal Outfall 207.

b. The WET limits shall be as follows:

Acute WET limit: NOAEC = 100%

Chronic WET limit: NOEC ≥ 69%; equivalent to TUc ≤ 1.44

c. In accordance with the schedule in Part I.C.3.e., the permittee shall conduct monthly acute and chronic toxicity tests using 24-hour flow-proportioned composite samples of final effluent from Interim Internal Outfall 207.

The Acute tests to use are:

48 Hour Static Acute test using **Americamysis bahia**

48 Hour Static Acute test using **Cyprinodon variegatus**

These single dilution acute tests are to be conducted using a minimum of 4 replicates, with 5 organisms each, for the control and 100% effluent. The NOAEC (No Observed Adverse Effect Concentration) shall be reported as either = 100% or < 100% (less than 100%). The effluent will be in compliance if the survival of the test organisms in both the control and 100% effluent exposures equals or exceeds 90%. If the survival in the effluent is less than 90% and this value is significantly different from the control survival, as determined by hypothesis testing, the NOAEC is less than 100% and the effluent is not in compliance. Tests in which control survival is less than 90% are not acceptable. A retest of a non-acceptable test shall be performed during the same compliance period as the test it is replacing. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3

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The Chronic tests to use are:

Chronic Static Renewal 7-Day Survival, Growth and Fecundity Test with **Americamysis bahia**

Chronic Static Renewal 7-Day Survival and Growth Test with **Cyprinodon variegatus**

These chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions) to determine the "No Observed Effect Concentration" (NOEC) for survival, growth, and fecundity. Results which cannot be quantified (i.e., a "less than" NOEC value) are not acceptable and a retest shall be performed. The NOEC, as determined by hypothesis testing, shall be converted to TU_c (Chronic Toxic Units) for DMR reporting where $TU_c = 100/NOEC$. Report the LC_{50} at 48 hours and the IC_{25} with the NOEC's in the test report.

d. The permit may be modified or revoked and reissued to include pollutant specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. The pollutant specific limitation shall control the toxicity of the effluent.

e. The permittee shall report the results on the DMR and shall supply one complete copy of the toxicity test report with the DMR each month. The permittee shall immediately cease the discharge upon becoming aware of an established WET limit exceedance. See Part I.B.15 for additional requirements.

DRAFT

D. STORM WATER MANAGEMENT CONDITIONS

1. Sampling Methodology for Specific Outfalls XXXX

The following shall be required when obtaining samples required by Part I.A. of this permit:

a. At the time of sampling, the permittee shall ensure that the effects of tidal influences are kept to an absolute minimum. This can be achieved by:

(1) Sampling at low tide and/or

(2) Sampling at a representative point which has been demonstrated to be free of tidal influences

b. In the event that sampling of an outfall is not possible due to the absence of effluent flow during a particular testing period, the permittee shall provide written notification to DEQ Tidewater Regional Office with the DMR for the month following the period in which samples were to be collected.

2. Storm Water Management Evaluation

The Storm Water Pollution Prevention Plan (SWP3), which is to be developed and maintained in accordance with Part I.F.4 of this permit, shall have a goal of reducing pollutants discharged at all the regulated storm water outfalls.

a. Pollutant Specific Screening

The goal shall place emphasis on reducing, to the maximum extent practicable, the following screening criteria parameters in the outfalls noted below.

OUTFALL NO.	POLLUTANTS
XX	

b. Toxicity Screening
The permittee shall conduct **annual acute toxicity tests** on outfalls 011, 012, and 016 using grab samples of final effluent. These acute screening tests shall be 48-hour static tests using Americamysis bahia and Cyprinondon variagatus, conducted in such a manner and at sufficient dilutions for calculation of a valid LC50.

The tests shall be conducted on a calendar year basis with one copy of all **results and supporting information, including Attachment A, submitted within 60 days from the date which the sample was taken and no later than January 10th of each year.**

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Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3

If any of the biological screening tests are invalidated, an additional test shall be conducted within thirty (30) days of notification. If there is no discharge during this 30-day period, a sample must be taken during the first qualifying discharge.

c. Sampling methodology for the noted outfalls shall be in accordance with Part I.A. and Part I.C. of this permit. The permittee shall submit the following information **with the results of the toxicity tests.**

(1) The actual or estimated effluent flow at the time of the sampling.

(2) An estimate of the total volume of storm water discharged through each outfall during the discharge event.

(3) The time at which the discharge event began, the time at which the effluent was sampled, and the duration of the discharge event.

d. The effectiveness of the SWP3 will be evaluated via the required monitoring for all parameters listed in Part I.C.2.a. of this permit for the regulated storm water outfalls, including the screening criteria parameters and toxicity screening. Monitoring results which are either above the screening criteria values or, in the case of toxicity, result in an LC_{50} of less than 100% effluent, will not indicate unacceptable values. However, those results will justify the need to reexamine the effectiveness of the SWP3 and any best management practices (BMPs) being utilized for the affected outfalls. In addition, the permittee shall amend the SWP3 whenever there is a change in the facility or its operation which materially increases the potential for activities to result in a discharge of significant amounts of pollutants.

By February 10th of each year, the permittee shall submit to the DEQ Tidewater Regional Office an annual report which includes the pollutant-specific and **a summary** of the biological monitoring data from the outfalls included in this condition along with a summary of any steps taken to modify either the Plan or any BMPs based on the monitoring data.
The first Stormwater Management Evaluation report is due on February 10, 2017.

DRAFT

ATTACHMENT A

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

TMP SUBMITTAL COVER SHEET

This form shall be completed for, and submitted with, each report of toxicity testing.

THIS REPORT SHALL CONTAIN THE FOLLOWING ITEMS	
	COMPLETED CHAIN OF SAMPLE CUSTODY
	CERTIFICATE OF ANALYSIS(ES)
	COMPLETE REPORT OF TOXICITY TESTING

VPDES PERMIT NUMBER: VA0004081

FACILITY NAME: Virginia Power-Chesapeake Energy Center

FACILITY LOCATION: Vepco Street, Chesapeake, VA 23320

OUTFALL NUMBER (circle one): 002 207 003 011 012 016

REPORTING PERIOD (ex: 2013 Annual): _____

SAMPLE TYPE (circle one): Stormwater Wastewater

WASTEWATER SOURCE(S) (if process wastewater, provide a brief source description):

_____

_____

SAMPLE EVENT INFORMATION (as applicable):

Sample Date and Time of Collection: _____

Time discharge began: _____

Storm event measurement (inches): _____

Time between sampling and last measurable storm event (hours): _____

ADDITIONAL INFORMATION:

If this sample is a **make-up** sample or a **retest**, indicate which category of test and the reporting period this submittal applies to:

Report Type: (i.e., makeup, retest, etc.) _____

Reporting Period: _____

If the required TMP sample(s) were not collected provide a reason/rationale:

_____

CERTIFICATION:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

_____

Signature, printed name and title of Principal Officer or Authorized Agent / Date

DRAFT

ATTACHMENT 9

MATERIAL STORED

DRAFT

- The long-term average concentration was determined as the average of the monthly average concentrations.
- The long-term average mass loading was determined as the average of the monthly average loadings.

ITEM VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

The table below shows chemicals that are either in use or may be used within the next five years. In addition to this list, CEC uses numerous chemicals to operate and maintain its equipment, vehicles, and facilities. Examples of these chemicals include lubricants, cleaners, detergents, polishes, waxes, cleaners, cutting oils, sanitizers, paints, solvents, and protectants. The majority of these chemicals are managed in small containers, but some are managed in larger quantities. It is conceivable that these chemicals and chemical types could appear in discharges from CEC at very low concentrations.

CEC occasionally uses fluorescein dye for leak detection purposes. The dye is not toxic to aquatic organisms. Dominion provide will written notice (fax, letter, or email) to DEQ prior to fluoroscein dye use so they are aware of the planned dye discharge and can adequately address any third party or citizen concerns.

CHEMICAL	USAGE / yr	PURPOSE	ULTIMATE PRODUCT OR FATE	OUTFALL	DEQ APPROVAL DATE
Sulfuric Acid	~90 Tons	Regenerant for Demineralizer	$CaSO_4$, $MgSO_4$, Na_2SO_4, H_2O, $FeSO_4$	101*	Prior to 2007 VPDES permit
50% Sodium Hydroxide (Freeze Point Depressed)	45-60 Dry Tons	Regenerant for Demineralizer	Na_2SO_4, H_2O	101*	Prior to 2007 VPDES permit
Sodium Hydroxide	~500 lbs.	pH Control of Boiler/Steam Cycle, Passivation of new metal	Sodium Salts (Inorganic), H_2O	002, 201**	Prior to 2007 VPDES permit
Calcium Hypochlorite Granular	~300 lbs.	Chlorination Agent	$Ca(OH)_2$,. On rare occasions used to chlorinate Sewer House.	206**	Prior to 2007 VPDES permit
Methoxypropylamine	1 Ton	pH Control of Condensate/Feedwater Cycle	NH_4OH, CO_2, H_2O	002 001***	Prior to 2007 VPDES permit
Soda Ash (Na_2CO_3)	< 1 Ton	pH Control; General Plant	Sodium Salts (Inorganic), CO_2, H_2O	003	Prior to 2007 VPDES permit
Hydrated Calcium Lime	<1-20 Tons	Acid Neutralization, Metals Pond	Inorganic Calcium Salts, Insoluble Metal Carbonates and Hydroxides	201**	Prior to 2007 VPDES permit
Trisodium Phosphates	<1 Ton	pH Control of Boiler/Steam Cycle	$Ca_3(PO_4)_2$, insoluble mono & di Calcium phosphates	002	Prior to 2007 VPDES permit
Disodium Phosphates	100 lbs.	pH Control of Boiler/Steam Cycle	Insoluble mono & di Calcium phosphates	002	Prior to 2007 VPDES permit
20 % HCl	25 - 30 Tons	pH Control of Reverse Osmosis Units	$CaCl_2$, $MgCl_2$, $FeCl_2$	001	Prior to 2007 VPDES permit
30 % HCl	25 - 30 Tons	pH Control of Reverse Osmosis Units	$CaCl_2$, $MgCl_2$, $FeCl_2$	001	Prior to 2007 VPDES permit
25 % H_2SO_4	25 - 30 Tons	pH Control of Reverse Osmosis Units	$CaSO_4$, $MgSO_4$, $FeSO_4$	001	Prior to 2007 VPDES permit
50 % H_2SO_4	25 - 30 Tons	pH Control of Reverse Osmosis Units	$CaSO_4$, $MgSO_4$, $FeSO_4$	001	Prior to 2007 VPDES permit
Sodium Metabisulfite	1 – 2 Tons	Removal of Cl^- from city water to Reverse Osmosis Units	NaCl, HCl, SO_4	001	Prior to 2007 VPDES permit
Flocide ® 375 Liquid Sanitizer (Biocide)	45 – 150 lbs.	Chemical Cleaning of Reverse Osmosis Units		002/101*	Prior to 2007 VPDES permit
Filtra Pure Acid Cleaner (Iron Removing Compound)	50 – 200 lbs.	Chemical Cleaning of Reverse Osmosis Units		002/101*	Prior to 2007 VPDES permit
Filtra Pure TF (Surfactant Agent)	50 – 200 lbs.	Chemical Cleaning of		002/101*	Prior to 2007

		Reverse Osmosis*			
Brine Salt		For regenerating softeners	CaCl, BaCl, MgCl	101*	Prior to 2007 VPDES permit
Hypersperse AF200UL	7000 lbs.	Antiscalant/Antifoulant for the Reverse Osmosis Units		001	Prior to 2007 VPDES permit
Hypersperse AS120	7000 lbs.	Antiscalant for the Reverse Osmosis Units		001	Prior to 2007 VPDES permit
Totaline Condenser Cleaner (Non-Acid)	2000 lbs.	Cleaning Steam/Air or Water/Air Heaters	KOH	201**	Prior to 2007 VPDES permit
Totaline Indoor Coil Cleaner	1500 lbs.	Cleaning Steam/Air or Water/Air Heaters	Sodium Metasilicate	201**	Prior to 2007 VPDES permit
Totaline Outdoor Condenser Cleaner	300 gals.	Cleaning Steam/Air or Water/Air Heaters	HF, H3PO4	201**	Prior to 2007 VPDES permit
Cygnet Plus	10 gals.	Surfactant for plant eradication	Absorption by plants (Phragmites)	201**,003,011	Prior to 2007 VPDES permit
Rodeo® Emerged Aquatic Weed and Brush Herbicide	5 gals.	Plant eradication	Absorption by plants (Phragmites)	201**,003,011	Prior to 2007 VPDES permit
Sodium Hypochlorite	7000-8000 gals	Chlorination agent for sewer house	HOCL	206** 002	Prior to 2007 VPDES permit
Sodium Hypochlorite	364,000 gals	Biocide for Condenser and Heat Exchangers	HOCL	001	Prior to 2007 VPDES permit
Hydrazine	1 Ton	Oxygen Scavenger	Ammoniated compounds, H2O	002/001***	Prior to 2007 VPDES permit
Carbohydrazide (eliminox)	1 Ton	Oxygen Scavenger	Ammoniated compounds, H2O	002/001***	Prior to 2007 VPDES permit
Aqua Ammonia	1200 tons	NOx Control	Ammoniated water	002	Prior to 2007 VPDES permit
Anhydrous Ammonia	800 tons	NOx Control	Ammoniated water	010	Prior to 2007 VPDES permit
Urea	400 tons	NOx Control	Ammoniated compounds, proteins	002	Prior to 2007 VPDES permit
GE Betz Reckon Cycle Reagent (L1266)	30 gals.	Tracer for BCW system	MoO4	002	Prior to 2007 VPDES permit
Nalco Defoamer FG	2000 gals.	Canal defoaming agent		001	05/2007
Nalco 7468	2000 gals.	Canal defoaming agent	SiO2	001	05/2007
Nalco 71-D5	2000 gals.	Antifoaming agent	Hydrocarbon (possible light sheen)	001	05/2007

		Reverse Osmosis*			
Brine Salt		For regenerating softeners	CaCl, BaCl, MgCl	101*	Prior to 2007 VPDES permit
Hypersperse AF200UL	7000 lbs.	Antiscalant/Antifoulant for the Reverse Osmosis Units		001	Prior to 2007 VPDES permit
Hypersperse AS120	7000 lbs.	Antiscalant for the Reverse Osmosis Units		001	Prior to 2007 VPDES permit
Totaline Condenser Cleaner (Non-Acid)	2000 lbs.	Cleaning Steam/Air or Water/Air Heaters	KOH	201**	Prior to 2007 VPDES permit
Totaline Indoor Coil Cleaner	1500 lbs.	Cleaning Steam/Air or Water/Air Heaters	Sodium Metasilicate	201**	Prior to 2007 VPDES permit
Totaline Outdoor Condenser Cleaner	300 gals.	Cleaning Steam/Air or Water/Air Heaters	HF, H3PO4	201**	Prior to 2007 VPDES permit
Cygnet Plus	10 gals.	Surfactant for plant eradication	Absorption by plants (Phragmites)	201**,003,011	Prior to 2007 VPDES permit
Rodeo® Emerged Aquatic Weed and Brush Herbicide	5 gals.	Plant eradication	Absorption by plants (Phragmites)	201**,003,011	Prior to 2007 VPDES permit
Sodium Hypochlorite	7000-8000 gals	Chlorination agent for sewer house	HOCL	206** 002	Prior to 2007 VPDES permit
Sodium Hypochlorite	364,000 gals	Biocide for Condenser and Heat Exchangers	HOCL	001	Prior to 2007 VPDES permit
Hydrazine	1 Ton	Oxygen Scavenger	Ammoniated compounds, H2O	002/001***	Prior to 2007 VPDES permit
Carbohydrazide (eliminox)	1 Ton	Oxygen Scavenger	Ammoniated compounds, H2O	002/001***	Prior to 2007 VPDES permit
Aqua Ammonia	1200 tons	NOx Control	Ammoniated water	002	Prior to 2007 VPDES permit
Anhydrous Ammonia	800 tons	NOx Control	Ammoniated water	010	Prior to 2007 VPDES permit
Urea	400 tons	NOx Control	Ammoniated compounds, proteins	002	Prior to 2007 VPDES permit
GE Betz Reckon Cycle Reagent (L1266)	30 gals.	Tracer for BCW system	MoO4	002	Prior to 2007 VPDES permit
Nalco Defoamer FG	2000 gals.	Canal defoaming agent		001	05/2007
Nalco 7468	2000 gals.	Canal defoaming agent	SiO2	001	05/2007
Nalco 71-D5	2000 gals.	Antifoaming agent	Hydrocarbon (possible light sheen)	001	05/2007

ATTACHMENT 10

RECEIVING WATERS INFO./ TIER DETERMINATION/STORET DATA/ STREAM MODELING

DRAFT

Dominion - Chesapeake Energy Center VA0004081
2701 Vepco Street, Chesapeake, VA
Outfall and Stream Information

Permit No	VA0004081	Municipal/ Industrial	Industrial	Major /Minor	Major	Classification	Application

Outfall Number	River Mile	Water Body	Receiving Stream	Latitude (degrees)	Latitude (minutes)	Latitude (seconds)	Longitude (degrees)	Longitude (minutes)	Longitude (seconds)
002	1.0	VAT-G15E	Deep Creek to Elizabeth River	36	45	42	76	18	15
003	.3	VAT-G15E	Southern Branch Elizabeth River	36	46	23	76	18	13
010	1.0	VAT-G15R	Southern Branch Elizabeth River	36	46	15	76	18	0
011	.35	VAT-G15R	Southern Branch Elizabeth River	36	46	30	76	18	0
012	.24	VAT-G15R	Southern Branch Elizabeth River	36	46	23	76	18	0
013	.23	VAT-G15R	Deep Creek to S Br Elizabeth River	36	45	50	76	18	15
015	1.3	VAT-G15R	Deep Creek to S Br Elizabeth River	36	45	57	76	18	15
016	1.4	VAT-G15R	Southern Branch Elizabeth River	36	46	0	76	18	0
017	1.5	VAT-G15R	Southern Branch Elizabeth River	36	45	57	76	18	0
018	1.6	VAT-G15R	Deep Creel to S Br Elizabeth River	36	45	50	76	18	15

Permit No	VA0004081	Municipal/ Industrial	Industrial	Major /Minor	Major	Classification	Application

Outfall Number	River Mile	Water Body	Receiving Stream	Latitude (degrees)	Latitude (minutes)	Latitude (seconds)	Longitude (degrees)	Longitude (minutes)	Longitude (seconds)
021	1.6	VAT-G15R	Deep Creel to S Br Elizabeth River	36	46	15	76	18	15
030	1.8	VAT-G15E	Southern Branch Elizabeth River	36	46	11	76	18	11
201	1.4	VAT-G15R	Deep Creek to S Br Elizabeth River	36	45	42	76	18	15
301	1.2	VAT-G15R	Southern Branch of Elizabeth River	36	46	23	76	18	13

Planning Permit Review

Date: 3/13/2015

To: Kristie Britt, TRO

Permit Writer: MYW

Facility: Dominion – Chesapeake Energy Center

Permit Number: VA0004081

Issuance, Reissuance or Modification (if Modification describe): Modification

Permit Expiration Date: 3/19/2017

Waterbody ID (ex: VAT-G15E): VAT-G15E

Topo Name: Norfolk South

Facility Address:

2701 Vepco St. Chesapeake, VA 23323

Receiving Stream: Attached are topographic maps showing facility property boundaries and outfall(s) locations for those included in this request.

Stream Name: Deep Creek to the Southern Branch of the Elizabeth River	
Stream Data Requested?	
Outfall #: 001	**Lat Lon: 36°45'45 76°18'11"**
Outfall #: 002	**Lat Lon: 36°45'42" 76°18'15"**
Outfall #: 013	**Lat Lon: 36°45'50" 76°18'15"**
Stream Name (2): same as above	
Stream Data Requested?	
Outfall #: 015	**Lat Lon: 36°45'57" 76°18'15"**
Outfall #: 018	**Lat Lon: 36° 45'50" 76°18'15"**
Outfall #: 021	**Lat Lon: 36°46'15" 76°18'15"**

If greater than 2 receiving streams or 3 outfalls per stream please provide a separate table with outfall listings and Latitude Longitude description.

Planning Review:

303 (d): Indicate Outfalls which discharge directly to an impaired (Category 5) stream segment and parameters impaired	
Outfalls 001-003 and 015, 018 and 021 discharge to impaired stream segment VAT-G15E_DEC01A06. Deep Creek is impaired Category 4A (has an approved TMDL) for Aquatic Life and Open Water Use for Dissolved Oxygen. Fish Consumption Use is impaired Category 5A (needing a TMDL) for PCBs and TCDD. See Attachment 1.	
Tier Determination	
Tier	The Tier 1 is maintained based on the discharge to an impaired stream. See Attachment 1.
Tier	
Management Plan	
Is the facility Referenced in a Management Plan?	No
Are limits contained in a Management Plan?	No

Review will be completed in 30 days of receipt of request.

Additional Comments:

KNB 3/26/2015

ATTACHMENT 11

303(d) LISTED SEGMENTS

DRAFT

2012 Impaired Waters - 303(d) List

Category 5 - Waters needing Total Maximum Daily Load Study

James River Basin

Cause Group Code / Impaired Use	Water Name / Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Date
G01E-02-EBEN	James River						
Aquatic Life	Estuarine Bioassessments	5A	31.343			2012	2024
G01E-03-PCB	James River and Various Tributaries						
Fish Consumption	PCB in Fish Tissue	5A	62.773			2002	2014
	PCB in Fish Tissue	5A	1.837			2004	2016
	PCB in Fish Tissue	5A	191.964		7.49	2006	2018
	PCB in Fish Tissue	5A	0.012			2008	2014
	PCB in Fish Tissue	5A	0.003			2010	2018
G01L-01-DO	Falling Creek Reservoir						
Aquatic Life	Oxygen, Dissolved	5A		88.37		2012	2024
G01R-01-PCB	Goode Creek						
Fish Consumption	PCB in Water Column	5A			1.25	2012	2024
G01R-02-CU	XVP - Almond Creek, UT						
Aquatic Life	Copper	5A			0.36	2012	2024
Wildlife	Copper	5A			0.36	2012	2024
G01R-02-PCB	Almond Creek						
Fish Consumption	PCB in Water Column	5A			2.36	2012	2024
G01R-02-PH	XVO and XVP (Almond Creek, UTs)						
Aquatic Life	pH	5A			0.82	2004	2016
G01R-02-ZN	XVP - Almond Creek, UT						
Aquatic Life	Zinc	5A			0.36	2012	2024
Wildlife	Zinc	5A			0.36	2012	2024
G01R-04-DO	Falling Creek						
Aquatic Life	Oxygen, Dissolved	5A			0.98	2008	2020
G01R-05-PH	Kingsland Creek						
Aquatic Life	pH	5C			8.50	2006	2018
G01R-06-PCB	Gillies Creek						
Fish Consumption	PCB in Water Column	5A			6.02	2012	2024
G01R-06-PH	Gillies Creek						
Aquatic Life	pH	5A			6.02	2004	2016
G01R-07-DO	Redwater Creek						
Aquatic Life	Oxygen, Dissolved	5C			2.94	2010	2022
G01R-09-DO	UT to James River - XPF						
Aquatic Life	Oxygen, Dissolved	5C			0.39	2004	2016
G01R-09-PH	UT to James River - XPF						
Aquatic Life	pH	5C			0.39	2004	2016
G01R-12-DO	Coles Run, UT						
Aquatic Life	Oxygen, Dissolved	5C			0.63	2006	2018

2012 Impaired Waters - 303(d) List

Category 5 - Waters needing Total Maximum Daily Load Study

James River Basin

Cause Group Code / Impaired Use	Water Name / Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Date
G14L-03-DO	Lake Prince Reservoir						
Aquatic Life	Oxygen, Dissolved	5A		708.85		2006	2018
G14R-01-BEN	Carbell Swamp - Upper						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			2.55	2004	2016
G14R-01-PH	Carbell Swamp - Upper						
Aquatic Life	pH	5A			2.55	2002	2014
G14R-02-BAC	Carbell Swamp - Lower						
Recreation	Escherichia coli	5A			2.86	2010	2022
G14R-02-DO	Carbell Swamp - Lower						
Aquatic Life	Oxygen, Dissolved	5A			2.86	2008	2020
G15E-01-01-TCDD	Elizabeth River Southern Branch and its tidal tributaries. CBP segment SBEMH.						
Fish Consumption	Dioxin (including 2,3,7,8-TCDD)	5A	3.137			2010	2022
G15E-02-04-EBEN	Eastern Branch Elizabeth River, Broad Creek and Unsegmented estuaries in EBEMH						
Aquatic Life	Estuarine Bioassessments	5A	1.759			2004	2016
	Estuarine Bioassessments	5A	0.586			2006	2018
G15E-03-01-EBEN	Elizabeth River Mainstem						
Aquatic Life	Estuarine Bioassessments	5A	4.528			2004	2016
	Estuarine Bioassessments	5A	3.440			2010	2022
G15E-04-02-EBEN	Western Branch Elizabeth River and Unsegmented estuaries in WBEMH						
Aquatic Life	Estuarine Bioassessments	5A	0.562			2006	2018
	Estuarine Bioassessments	5A	2.166			2010	2022
G15E-06-01-BAC	Hampton River						
Recreation	Enterococcus	5A	0.006			2006	2024
	Enterococcus	5A	0.545			2010	2022
G15E-06-02-BAC	James River - Anderson Park Beach						
Recreation	Enterococcus	5A	0.010			2012	2024
G15E-06-03-BAC	Hoffler Creek						
Recreation	Enterococcus	5A	0.057			2008	2020
H01R-01-HG	James River						
Fish Consumption	Mercury in Fish Tissue	5A			15.55	2010	2022
H03R-01-BEN	Blackwater Creek						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			10.30	2010	2022
H03R-03-BEN	Ivy Creek						
Aquatic Life	Benthic-Macroinvertebrate Bioassessments	5A			20.80	2010	2022
H03R-04-PCB	James River						
Fish Consumption	PCB in Fish Tissue	5A			10.53	2004	2016
	PCB in Fish Tissue	5A			164.27	2006	2016
	PCB in Fish Tissue	5A			3.88	2008	2016
	PCB in Fish Tissue	5A			23.10	2008	2018

Appendix 5 - List of Impaired (Category 5) Waters in 2012

James River Basin

Cause Group Code: G01E-03-PCB **James River and Various Tributaries**

Location: Estuarine James River from the fall line to the Hampton Roads Bridge Tunnel, including several tributaries listed below.

City / County:				
Charles City Co	Chesapeake City	Chesterfield Co	Colonial Heights City	Dinwiddie Co
Hampton City	Henrico Co	Hopewell City	Isle Of Wight Co	James City Co
New Kent Co	Newport News City	Norfolk City	Petersburg City	Portsmouth City
Prince George Co	Richmond City	Suffolk City	Surry Co	Virginia Beach City
Williamsburg City				

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

During the 2002 cycle, the James River from the Fall line to Queens Creek was considered not supporting of the Fish Consumption Use due to PCBs in multiple fish species at multiple DEQ monitoring locations.

During the 2004 cycle, a VDH Fish Consumption Restriction was issued from the fall line to Flowerdew Hundred and the segment was adjusted slightly to match the Restriction. In addition, in the 2004 cycle, the Chickahominy River from Walkers Dam to Diascund Creek was assessed as not supporting the Fish Consumption Use because the DEQ screening value for PCBs was exceeded in 3 species during sampling in 2001.

During the 2006 cycle, the VDH restriction was extended on 12/13/2004 to extend from the I-95 bridge downstream to the Hampton Roads Bridge Tunnel and include the tidal portions of the following tributaries:

Appomattox River up to Lake Chesdin Dam
Bailey Creek up to Route 630
Bailey Bay
Chickahominy River up to Walkers Dam
Skiffes Creek up to Skiffes Creek Dam
Pagan River and its tributary Jones Creek
Chuckatuck Creek
Nansemond River and its tributaries Bennett Creek and Star Creek
Hampton River
Willoughby Bay and the Elizabeth R. system (Western, Eastern, and Southern Branches and Lafayette R.) and tributaries St. Julian Creek, Deep Creek, and Broad Creek

The advisory was modified again on 10/10/2006 to add Poythress Run.

The impairments were combined. The TMDL for the lower extended portion is due in 2018.

James River and Various Tributaries **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:	**256.589**		**7.49**

Sources:

Contaminated Sediments	Source Unknown	Sources Outside State Jurisdiction or Borders

Appendix 5 - List of Impaired (Category 5) Waters in 2012

James River Basin

Cause Group Code: **G15E-01-01-TCDD** **Elizabeth River Southern Branch and its tidal tributaries. CBP segment SBEMH.**

Location: This cause encompasses the entirety of the Southern Branch Elizabeth River and its tidal tributaries.

City / County: Chesapeake City Norfolk City Portsmouth City

Use(s): Fish Consumption

Cause(s) /
VA Category: Dioxin (including 2,3,7,8-TCDD) / 5A

The Fish Consumption Use is impaired based on the VDH fish consumption advisory within the Southern Branch Elizabeth River and its tidal tributaries for Dioxin in Blue Crab hepatopancreas contamination, issued by the VDH 1/23/09.

Elizabeth River Southern Branch and its tidal tributaries. CBP segment SBEMH. **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dioxin (including 2,3,7,8-TCDD) - Total Impaired Size by Water Type:	**3.137**		

Sources:

Source Unknown

2012 Impaired Waters (Category 4A) TMDL Approved and (Category 4B) Other Control Measures Present*

James River Basin

Cause Group Code / Impaired Use	Water Name / Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Date
JMSMH-DO-BAY	James River CBP segment JMSMH and Tidal Tributaries						
Aquatic Life	Oxygen, Dissolved	4A	100.291			1998	2010
	Oxygen, Dissolved	4A	18.371			2006	2010
Open-Water Aquatic Life	Oxygen, Dissolved	4A	100.291			1998	2010
	Oxygen, Dissolved	4A	18.371			2006	2010
JMSOH-DO-BAY	James River Oligohaline Estuary						
Aquatic Life	Oxygen, Dissolved	4A	48.740			2006	2010
Open-Water Aquatic Life	Oxygen, Dissolved	4A	2.212			2006	2010
JMSPH-BNUT-BAY	James River CBP segment JMSPH and Tidal Tributaries						
Aquatic Life	Nutrient/Eutrophication Biological Indicators	4A	25.011			2010	2010
JMSPH-DO-BAY	James River CBP segment JMSPH and Tidal Tributaries						
Aquatic Life	Oxygen, Dissolved	4A	0.547			2006	2010
Open-Water Aquatic Life	Oxygen, Dissolved	4A	0.547			2006	2010
JMSTFL-DO-BAY	James River Tidal Freshwater (Lower) Estuary						
Aquatic Life	Oxygen, Dissolved	4A	0.123			1994	2010
	Oxygen, Dissolved	4A	28.981			2006	2010
	Oxygen, Dissolved	4A	0.049			2008	2010
Open-Water Aquatic Life	Oxygen, Dissolved	4A	0.123			1994	2010
	Oxygen, Dissolved	4A	28.981			2006	2010
	Oxygen, Dissolved	4A	0.049			2008	2010
JMSTFL-SAV-BAY	James River Tidal Freshwater (Lower) Estuary						
Aquatic Life	Aquatic Plants (Macrophytes)	4A	29.103			2006	2010
	Aquatic Plants (Macrophytes)	4A	0.049			2008	2010
Shallow-Water Submerged Aquatic Vegetation	Aquatic Plants (Macrophytes)	4A	29.103			2006	2010
	Aquatic Plants (Macrophytes)	4A	0.049			2008	2010
JMSTFU-DO-BAY	James River Tidal Freshwater (Upper) Estuary						
Aquatic Life	Oxygen, Dissolved	4A	7.773			2010	2010
JMSTFU-SAV-BAY	James River Tidal Freshwater (Upper) Estuary						
Aquatic Life	Aquatic Plants (Macrophytes)	4A	7.773			2006	2010
Shallow-Water Submerged Aquatic Vegetation	Aquatic Plants (Macrophytes)	4A	7.773			2006	2010
LAFMH-DO-BAY	Chesapeake Bay segment LAFMH (Lafayette River)						
Aquatic Life	Oxygen, Dissolved	4A	2.163			2006	2010
Open-Water Aquatic Life	Oxygen, Dissolved	4A	2.163			2006	2010
SBEMH-DO-BAY	Chesapeake Bay segment SBEMH (Southern Branch, Elizabeth River)						
Aquatic Life	Oxygen, Dissolved	4A	3.195			2006	2010
Deep-Water Aquatic Life	Oxygen, Dissolved	4A	2.446			2006	2010
Open-Water Aquatic Life	Oxygen, Dissolved	4A	3.195			2006	2010

VIRGINIA

Draft 305(b)/303(d)

WATER QUALITY INTEGRATED REPORT

to

CONGRESS and the EPA ADMINISTRATOR

for the

PERIOD

January 1, 2005 to December 31, 2010

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DCR
Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL AND RECREATIONAL RESOURCES

Richmond, Virginia

March 2012

TMDL Permit Review

Date: 3/16/2015

To: Jennifer Howell, TRO √ JSH 4/3/2015

Permit Writer: MYW

Facility: Dominion – Chesapeake Energy Center

Permit Number: VA0004081

Issuance, Reissuance or Modification (if Modification describe) : Modification

Permit Expiration Date: 3/19/2017

Waterbody ID (ex: VAT-G15E): VAT-G15E

Topo Name: Norfolk South

Facility Address:

2701 Vepco St. Chesapeake, VA 23323

Receiving Stream: Attached are topographic maps showing facility property boundaries and outfall(s) locations for those included in this request.

Stream Name: Deep Creek to the Southern Branch of the Elizabeth River	
Click here to enter text.	
Outfall #: 001	**Lat Lon: 36°45'45 76°18'11"**
Outfall #: 002	**Lat Lon: 36°45'42" 76°18'15"**
Outfall #: 013	**Lat Lon: 36°45'50" 76°18'15"**
Stream Name (2): same as above	
Click here to enter text.	
Outfall #: 015	**Lat Lon: 36°45'57" 76°18'15"**
Outfall #: 018	**Lat Lon: 36° 45'50" 76°18'15"**
Outfall #: 021	**Lat Lon: 36°46'15" 76°18'15"**

If greater than 2 receiving streams or 3 outfalls per stream please provide a separate table with outfall listings and Latitude Longitude description.

Is there a design flow change? If yes give the change. Click here to enter text.

TMDL Review:

Is a TMDL IN PROGRESS for the receiving stream? Yes, a PCB TMDL for tidal James River and Elizabeth River watersheds has an anticipated completion date of 2015	
Has a TMDL been APPROVED that includes the receiving stream?	
Yes, see below	
If yes, Include TMDL Name, Pollutant(s) and date of approval:	
1) Chesapeake Bay TMDL EPA approved 12/29/2010 : nitrogen, phosphorus, and TSS 2) Bacteria TMDL Development for the Elizabeth River Watershed. EPA approved 7/20/2010, SWCB approved 9/30/2010: *enterococci*	
Is the facility assigned a WLA from the TMDL?	No, see below
If Yes, what is the WLA?	
1) VA0004081 was listed in the Chesapeake Bay TMDL under Bay segment SBEMH as a non-significant discharger. Because an aggregated WLA exists, this permit did not receive an individual WLA. The aggregated WLA is presented as a delivered load for each of the impaired 92 Bay segments. (TMDL Report-Appendix Q) 2) VA0004081 was listed in the Bacteria TMDL Development for the Elizabeth Watershed report (TMDL Report-Appendix B) as a permitted facility within the watershed. No WLA was assigned to this permit because it is not considered a contributor of the TMDL pollutant.	

Review will be completed in 30 days of receipt of request.

ATTACHMENT 12

TABLE III(a) AND TABLE III(b) - CHANGE SHEETS

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TABLE III(a)

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes FROM PREVIOUS PERMIT and give a brief rationale for the changes).

OUTFALL\ NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
001	All	Removed All	Removed All	Removed from permit, industrial discharge no longer exists	4/29/15 MYW
101	All	Removed All	Removed All	Removed permit, industrial discharge no longer exists	4/29/15 MYW
206	All	Removed All	Removed All	STP no longer discharges, not in operation	4/29/15 MYW
004, 005, 007, 008, 009, 019, 020				Removed from permit, discharges no longer exist	4/29/15 MYW
010	pH		None to 6.0 and 9.0	The discharge includes truck washes	6/29/15 MYW
010	Dissolved Zinc	None to 1/Quarter	No limit	PWJ See Attachment 6.	9/11/15 MYW
010	TP, TN, Nitrite + Nitrate, TKN	None to 1/Year	No limit	Required by the WIP1 and guidance for nutrient data collection 14-2011	9/10/15 MYW
011, 012, 016, and 017	TP, TN, Nitrite + Nitrate, TKN	None to 1/6 Months	No limit	Required by the WIP1 and guidance for nutrient data collection 14-2011	9/10/15 MYW

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OUTFALL\ NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
011, 012, 016, 017	TSS	1/Year to 1/6 Months	No limit	Required by the WIP1 and guidance for nutrient data collection 14-2011	9/10/15 MYW
011 and 012	Flow pH	1/Year to 1/6 Months		Addition of Nutrient monitoring at a higher interval of time	1/6/16 MYW
016,017	pH	1/Year to 1/3 Months	No limit	Improved data analysis with monitoring at the same frequency as metals	9/10/15 MYW
030	All	Removed All	No previous limits	Discharge no longer associated with industrial activity, no monitoring required	4/29/15 MYW
031	All	Removed All		Removed from permit, discharge no longer exist	4/29/15 MYW
003	TP, TN, Nitrite + Nitrate, TKN	None to 1/Year	No limit	Required by the WIP1 and guidance for nutrient data collection 14-2011	1/5/16 MYW
301	All	1/3 Months to 1/6 Months	1/3 Months to 1/6 Months	AST no longer in use; valved discharge remains a point source, plan for removal	4/29/15 MYW
002	Ammonia	2/Month to none		Removed from the permit, discharge from SBR no longer exist	6/5/15 MYW

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OUTFALL\ NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
002	Total Residual Chlorine	1/3 months to none	0.026 mg/l monthly avg and daily max to none	Removed from the permit, change in operations results in cessation of discharge (STP) contributing TRC to outfall	6/5/15 MYW
002	Nitrite + Nitrate, TKN	None to 1/Year	No limit	Required by the WIP1 and guidance for nutrient data collection 14-2011	9/10/15 MYW
002	Dissolved Copper	1/6 Months to None	No limit	Change in operations, no longer performing operations associated with the Special Condition I.B from the 2012 permit issuance	1/6/16 MYW
002	Dissolved Zinc	None to 1/Month	Monitoring only monthly average and daily max	Change in operations and to characterize stormwater during/after decommissioning activities	6/2/16 MYW

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OUTFALL\ NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
002	Dissolved Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Cobalt, Copper, Iron, Lead, Mercury, Molybdenum, Nickel, Total Recoverable Selenium, Silver, Thallium, Vanadium; and Dissolved Chromium VI	None to 1/Quarter	No limit	PJ to protect water quality, see Attachment 6	5/6/16 MYW
207	Flow, pH, TSS, O&G, Arsenic, Cadmium, Chromium IV, Copper, Nickel, Selenium, Thallium, Lead, Mercury, Silver, Zinc, and Antimony	None to 3/W	0.094 MGD Daily Max; pH SU 6.0 min and 9.0 max; TSS mg/l 30 monthly avg and 100 max; O&G mg/l 15 mthly avg. and 20 max; Antimony 3200 ug/l mthly avg and 3200 daily max; Arsenic ug/l 75 mthly avg and 140 ug/l; Cadmium ug/l 35 mthly avg and 64 ug/l; Chromium VI ug/l 200 mthly avg and 360 max; Copper ug/l 18 mthly avg and 33 max; Nickel ug/l 33 mthly avg and 60 max; Selenium ug/l 280 mthly avg and 520 max; Thallium ug/l 2.4 mthly avg and 2.4 max; Lead ug/l 37 mthly avg and 68 max; Mercury ug/l 2.0 mthly avg and 3.6 max; Silver ug/l 2.1 mthly avg and 3.8 max; Zinc ug/l 98 mthly avg and 180 max;	PWJ to protect water quality, see Attachment 6	1/28/16 MYW
207	Acute and Chronic WET	None to 1/Month	100 NOAEC min, 1.44 TUc max	PWJ to protect water quality, see Attachment 6	12/4/15 MYW

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OUTFALL\ NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
207	Dissolved Aluminum, Barium, Beryllium, Boron, Cobalt, Iron, Molybdenum, and Vanadium	None to 1/Month	No limit	PWJ to protect water quality, EPA guidance and CCR Rule history	1/28/16 MYW

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
(2012) Special Condition I.B, Boiler/Metals Cleaning Requirements - Outfall 201, also removed the monitoring for dissolved copper on Outfall 002	Removed from the permit; no longer applies since the facility is no longer in operation - no longer boiler cleaning	4/29/15 MYW
(2012) Special Condition I.C, Alternative to Chlorination As A Disinfection Method - Outfall 206	Removed from permit; no longer applies since the facility is no longer in operation - Sewage Treatment Plant (STP) no longer in service	4/29/15 MYW
(2012) Special Condition I.D.2, Licensed Operator Requirement	Removed from permit; no longer applies since the facility is no longer in operation - STP no longer in service and therefore no requirement for Licensed Operator	4/29/15 MYW
	Update language to the Special Condition I.B.6 for Materials Handling and Storage	5/6/16 MYW
	Add Special Condition I.B.7. Minimum Freeboard	4/29/15 MYW
	Add Special Condition I.B.8. Surface Water Monitoring	4/29/15 MYW
(2012) Special Condition I.D.1.b, Nutrient Enriched Waters Reopener	Removed from permit; no longer applies - special standard no longer exists for this segment	4/29/15 MYW
(2012) Storm Water Management Conditions I.F.1, Sampling Methodology for Specific Outfalls 010, 011, 012, 016, 017, 030	Part I.D.1, Outfall 010 removed from list of specific outfalls. Outfall contains vehicle wash water and runoff from the ash silo area (removed); stormwater specific requirements may not capture the vehicle wash water	9/10/15 MYW
	Add Special Condition I.B.9. Nutrient Monitoring Requirements - new condition for nonsignificant dischargers under the Chesapeake Bay TMDL	4/29/15 MYW
(2012) Special Condition I.D.8, Cooling Water and Boiler Additives	Removed from permit; no longer applies since the facility is not in operation - no longer operating cooling water systems or boilers	4/29/15 MYW

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OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
(2012) Special Condition I.D.9. Outfall 010	Removed from permit; no longer applies since the facility is no longer in operation - screens have been removed and cleaning of screens no longer required	4/29/15 MYW
(2012) Special Condition I.D.10, Section 316(b) Phase II Requirements	Removed from permit; no longer applies since the facility is no longer in operation	4/29/15 MYW
(2012) Special Condition I.D.12. Overflow of Untreated Coal Pile Runoff from a 10-Year/24-Hour Storm - outfall 003	Special Condition I.B.10	4/29/15 MYW
(2012) Special Condition I.D.13, Collected Debris for Trash Intake Racks	Removed from permit; no longer applies since the facility is no longer in operation - no intake structures in use	4/29/15 MYW
(2012) Special Condition I.D.14, Mixing Zone Requirements	Removed from permit; no longer applies since the facility is no longer in operation - process water discharge from Outfall 001 eliminated	4/29/15 MYW
(2012) Special Condition I.D.15, Total Residual Chlorine Discharge Duration	Removed from permit; no longer applies since the facility is no longer in operation - chlorination system has been removed from service	4/29/15 MYW
(2012) Special Condition I.D.16, Coal Unloading Dock Conditions and BMP's	Removed from permit; no longer applies since the facility is no longer in operation - coal is no longer unloaded at the facility and the area cleaned	4/29/15 MYW
(2012) Special Condition I.E. Toxics Management Program (TMP)	Special condition changed to I.C Whole Effluent Toxicity (WET) -	4/29/15 MYW
(2012) Special Condition I.E.1.a, Biological Monitoring	Remove Outfall 001, continues 002 and 003. 003 may discontinue once the metals cleaning basin is closed and DEQ has been notified of the closure of the metals basin	5/6/16 MYW
(2012) Special Condition I.E.1, Biological Monitoring	Added I.C.1.f and g.	2/24/16 MYW
(2012) Special Condition I.E.2, Reporting Schedule	Updated I.C.2.(a) through I.C.2.(d) and added I.C.2.(e) through I.C.2.(j)	5/6/16 MYW
	Added I.C.3, WET Limit for Interim Internal Outfall 207	5/6/16 MYW
(2012) Special Condition I.F. Stormwater Management Condition	Special Condition changed to I.D	4/29/15 MYW
(2012) Special Condition I.F.1., Sampling Methodology for Specific Outfalls 010, 011, 012, 016, 017, 030	Part I.D.1, Outfall 030 removed from list of specific outfalls. Outfall is no longer exposed to industrial activity.	5/6/16 MYW

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OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
(2012) Special Condition I.F.2.b., Toxicity Screening	Special Condition changed to I.D.2.b. - added Cyprinodon variagatus to the test list, and removed annual acute toxicity tests on outfall 030	2/24/16 MYW
(2012) Special Condition I.F.5 Facility Specific Storm Water Conditions	Updated the language in accordance with new sector O specific requirements, 2014	9/10/15 MYW
	Part I.A.1 for Outfalls 002, 003, 010, 011 and 012. Addition of footnotes regarding nutrient monitoring requirements as outlined in new Special Condition I.B.9	9/10/15 MYW
	Add Special Condition I.B.17 Conceptual Engineering Report Requirements	1/5/16 MYW
	Add Special Condition I.B.18 Ash Pond Decanting/Dewatering Enhanced Treatment and Reporting Requirements	5/23/16 MYW
	Add Special Condition I.B.13 Ash Pond Dewatering	1/5/16 MYW
(2012) Part I.A.1, Outfalls 002, 201, 003, and 301	Part I.A.1. Add footnotes clarifying the number of significant figures of whole number effluent limitations that contain trailing zeroes. Based on Guidance Memo 06-2016.	5/6/16 MYW
(2012) Part I.A.1, Outfall 002	Part I.A.1. Add footnote citation [a] to Oil & Grease, and Total Phosphorus, referring to maximum quantification levels established in Part I.B.4 for select parameters with numeric effluent limitations.	5/6/16 MYW
(2012) Part I.A.1, Outfall 207	Part I.A.1. Addition of footnotes regarding requirements for 3/W and 1/M sampling and cease discharge of exceedances	1/5/16 MYW
	Add Special Condition I.B.14 Ash Pond Closure Stormwater Management	1/5/16 MYW
	Add Special Condition I.B.15 Cease Discharge Requirement	1/5/16 MYW
	Add Special Condition I.B.16, Drawdown Rate Requirement	1/5/16 MYW
(2012) Special Condition I.D.5.a. Quantification Levels Under Part I.A	Special Condition I.B.4.a. Levels were reduced, added, and or subtracted based on new permit monitoring conditions	1/5/16 MYW
	Add Special Condition I.B.11 - Closure of the Bottom Ash Pond	12/4/15 MYW

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OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
(2012) Special Condition I.D.3, Operations and Maintenance (O&M) Manual (Industrial)	Special Condition I.G.2, O&M Manual Requirements. Add new language for Operation and Maintenance manual requirements	1/5/16 MYW

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TABLE III(b)

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes MADE DURING PERMIT PROCESS and give a brief rationale for the changes).

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
001					

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL

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ATTACHMENT 13

NPDES INDUSTRIAL PERMIT RATING WORKSHEET

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NPDES Permit Rating Work Sheet

_x_ Regular Addition
___ Discretionary Addition
___ Score change, but no status change
___ Deletion

NPDES NO: |_V_|_A_|_0_|_0_|_0_|_4_|_0_|_8_|_1_|

Facility Name:

|_C_|_h_|_e_|_s_|_a_|_p_|_e_|_a_|_k_|_ |_E_|_n_|_e_|_r_|_g_|_y_|_ |_C_|_e_|_n_|_t_|_e_|_r_|

City: |_C_|_h_|_e_|_s_|_a_|_p_|_e_|_a_|_k_|_e_|

Receiving Water: |_D_|_e_|_e_|_p_|_ |_C_|_r_|_e_|_e_|_k_|_&_|_S_|_o_|_u_|_t_|_h_|_ |_B_|_r_|_ |_E_|_l_|_i_|_z_|_a_|_b_|_i_|_t_|_h_| Rv.

Reach Number: |_ |_ |_ |_ |_ |_ |_ |_ |_ |_ |

Is this facility a steam electric power plant (SIC=4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate

_x_ YES: score is 600 (stop here) ___ NO (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

___ YES; score is 700 (stop here)
___ NO (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: |_ |_ |_ |_| Primary SIC Code: |_ |_ |_ |_|

Other SIC Codes: |_ |_ |_ |_| |_ |_ |_ |_| |_ |_ |_ |_| |_ |_ |_ |_|

Industrial Subcategory Code: |_ |_ |_| (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
___ No process waste streams	0	0	___ 3.	3	15	___ 7.	7	35
___ 1.	1	5	___ 4.	4	20	___ 8.	8	40
___ 2.	2	10	___ 5.	5	25	___ 9.	9	45
			___ 6.	6	30	___ 10.	10	50

Code Number Checked: |_ |_|

Total Points Factor 1: |_ |_|

FACTOR 2: Flow/Stream Flow Volume *(Complete Either Section A or Section B; check only one)*

Section A–Wastewater Flow Only Considered

Wastewater Type (See Instructions)			Code	Points
Type I:	Flow < 5 MGD	___	11	0
	Flow 5 to 10 MGD	___	12	10
	Flow > 10 to 50 MGD	___	13	20
	Flow > 50 MGD	___	14	30
Type II:	Flow < 1 MGD	___	21	10
	Flow 1 to 5 MGD	___	22	20
	Flow > 5 to 10 MGD	___	23	30
	Flow > 10 MGD	___	24	50
Type III:	Flow < 1 MGD	___	31	0
	Flow 1 to 5 MGD	___	32	10
	Flow > 5 to 10 MGD	___	33	20
	Flow > 10 MGD	___	34	30

Section B–Wastewater and Stream Flow Considered

Wastewater Type (See Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow		Code	Points
Type I/III:	< 10%	___	41	0
	> 10% to < 50%	___	42	10
	> 50%	___	43	20
Type II:	<10%	___	51	0
	> 10% to < 50%	___	52	20
	> 50%	___	53	30

Code Checked from Section A or B: |_ |_|

Total Points Factor 2: |_ |_|

NPDES No.: |_V_|_A_|_0_|_0_|_0_|_4_|_0_|_8_|_1_|

FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutant: (check one) ___ BOD ___ COD ___ Other: _____

Permit Limits: (check one)		Code	Points
___	< 100 lbs/day	1	0
___	100 to 1000 lbs/day	2	5
___	>1000 to 3000 lbs/day	3	15
___	>3000 lbs/day	4	20

Code Checked: |___|

Points Scored: |___|___|

B. Total Suspended Solids (TSS)

Permit Limits: (check one)		Code	Points
___	< 100 lbs/day	1	0
___	100 to 1000 lbs/day	2	5
___	>1000 to 5000 lbs/day	3	15
___	>5000 lbs/day	4	20

Code Checked: |___|

Points Scored: |___|___|

C. Nitrogen Pollutant: (check one) ___ Ammonia ___ Other: _____

Permit Limits: (check one)		Code	Points
___	< 300 lbs/day	1	0
___	300 to 1000 lbs/day	2	5
___	>1000 to 3000 lbs/day	3	15
___	>3000 lbs/day	4	20

Code Checked: |___|

Points Scored: |___|___|

Total Points Factor 3: |___|___|

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this includes any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above referenced supply.

___ YES (if yes, check toxicity potential number below)
___ NO (if no, go to Factor 5)

Determine the human health toxicity potential from Appendix A. Use the same SIC code and subcategory reference as in Factor 1. (Be sure to use the human health toxicity group column -- check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
___ No process waste streams	0	0	___ 3.	3	0	___ 7.	7	15
___ 1.	1	0	___ 4.	4	0	___ 8.	8	20
___ 2.	2	0	___ 5.	5	5	___ 9.	9	25
			___ 6.	6	10	___ 10.	10	30

Code Number Checked: |___|___|

Total Points Factor 4: |___|___|

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NPDES No.: |_V_|_A_|_0_|_0_|_0_|_4_|_0_|_8_|_1_|

FACTOR 5: Water Quality Factors

A. Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge?

	Code	Points
___ Yes	1	10
___ No	2	0

B. Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?

	Code	Points
___ Yes	1	0
___ No	2	5

C. Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?

	Code	Points
___ Yes	1	10
___ No	2	0

Code Number Checked: A |___| B |___| C |___|

Points Factor 5: A |___|___| + B |___| + C |___|___| = |___|___| TOTAL

FACTOR 6: Proximity to Near Coastal Waters

A. Base Score: Enter flow code here (from Factor 2): |___|___| ***Enter the multiplication factor that corresponds to the flow code:*** |___|___|

Check appropriate facility HPRI Code (from PCS):

	HPRI #	*Code*	*HPRI Score*	Flow Code	Multiplication Factor
___	1	1	20	11, 31, or 41	0.00
				12, 32, or 42	0.05
___	2	2	0	13, 33, or 43	0.10
				14 or 34	0.15
___	3	3	30	21 or 51	0.10
				22 or 52	0.30
___	4	4	0	23 or 53	0.60
				24	1.00
___	5	5	20		

HPRI code checked: |___|

Base Score: (HPRI Score) _____ x (Multiplication Factor) _____ = _____ (TOTAL POINTS)

B. Additional Points--NEP Program
For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

	Code	Points
___ Yes	1	10
___ No	2	0

C. Additional Points--Great Lakes Area of Concern
for a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern (see instructions)

	Code	Points
___ Yes	1	10
___ No	2	0

Code Number Checked: A |___| B |___| C |___|

Points Factor 6: A |___|___| + B |___|___| + C |___|___| = |_____| TOTAL

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NPDES Permit Rating Work Sheet

NPDES NO: |_V_|_A_|_0_|_0_|_0_|_4_|_0_|_8_|_1_|

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	_____
2	Flow/Stream flow Volume	_____
3	Conventional Pollutants	_____
4	Public Health Impacts	_____
5	Water Quality Factors	_____
6	Proximity to Near Coastal Waters	_____
	TOTAL (Factors 1-6)	_____

S1. Is the total score equal to or greater than 80? _x_ Yes (Facility is a major) ___ No

S2. If the answer to the above question is no, would you like this facility to be discretionary major?
___ No
___ Yes (add 500 points to the above score and provide reason below:

Reason:

_____

_____

_____

_____

_____

NEW SCORE: ___600_____

OLD SCORE: ___600_____

Melinda Woodruff
Permit Reviewer's Name

(757) 518 - 2174
Phone Number

October 28, 2011
Date

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ATTACHMENT 14

CHRONOLOGY SHEET

Attachment 14
Chronology of Events

NPID	VA0004081	Facility Name	Dominion - Chesapeake Energy Center	Activity	Modification

Code	Event	Date	Comment
DTADJ	FS/SOB/draft permit sent to adj. State(s)		
DTOWNC4	Owner concurrence of draft permit		
DTC1VDH	Comments rec'vd from State Agencies on App	04/07/2015	DSS, 3/24 VDH
DTLP	Reissuance letter mailed		
PNHEAR	Public hearing date		
LGNPERM	Local gov't notification		
DTOWN4	FS/SOB draft permit sent to owner 4th time		
DTOWN1	FS/SOB draft permit sent to owner		
DTC2EPA	EPA concurrence on draft permit		
DT1VDH	App sent to State Agencies (list in comment field)	03/13/2015	
DEPFEE	Application fee deposited		
APRPHOCAL1	First Application Reminder Phone Call		
VPDESNO	Permit number obtained (Iss)		
MISC	Miscellaneous		
316A	316(a) Variance		
FLED	Permit expires	03/19/2017	
DTEFF	Permit effective	03/20/2012	
DTOWNC2	Second time comments received from owner		
DTSITE	Site visit	05/17/2015	
APCP	Application totally / technically complete	09/09/2015	
DTCOE	Comments rec'vd from Federal Agencies on App		
APRET4	App returned/Additional info requested 4th time		
LGNRAPP	local gov't notified of receipt of app. (Iss/Mod)	03/16/2015	
APDU	Reissuance application due		
PREVFLED	Old expiration date		
RORTTC	Riparian owner request sent to tax commissioner		
APRET1	App returned/Additional info requested 1st time		
APRPHOCAL2	Second Application Reminder Phone Call		
PNOT	Date of Public Notice		
DTOWNC3	Third time comments received from owner		
DTPKVDH	FS/SOB draft permit sent to State Agencies (list i		
DT1PLAN	FS/SOB draft permit sent to planning		
DTDDP	Draft permit developed	09/11/2015	
DTMIF	App sent to Fed Agencies (list in comment field)		
ROAPCP	Application Administratively complete		
APRET2	App returned/Additional info requested 2nd time		
APRD2	Applic/Additional Info received at RO 2nd time	02/24/2015	
APRD	Application received at RO 1st time	01/13/2015	
DTDMRDUE	First DMR due		
DTEPA	FS/SOB draft permit sent to EPA/OWPS		
DTREV	Draft reviewed		
DTSITERP	Site inspection report	01/02/2014	
APRD4	Applic/Additional info received at RO 4th time		
APRET3	App returned/Additional info requested 3rd time		
APRD3	Applic/Additional info received at RO 3rd time		
RONOTE	Riparian landowners notified (Iss,Mod)	03/16/2015	
DTSIGN	Date Permit signed		

NPID	VA0004081	Facility Name	Dominion - Chesapeake Energy Center	Activity	Modification

Code	Event	Date	Comment
DTOBJ1	First time comments received from owner on draft		
DTPLAN	Planning concurrence on draft permit		
ROLISTR	Riparian owner list received	02/24/2015	
FAMSUB	Financial Assurance Mechanism Submitted		
SCCERTR	State Corporation certification received		
DTNEWS	Public notice letter sent to newspaper		
DTOWN3	FS/SOB draft permit sent to owner 3rd time		
DTOWN2	FS/SOB draft permit sent to owner 2nd time		
DTC2VDH	VDH concurrence on draft permit		
APCOMLET	App complete letter sent to permittee		
PN2CO	PN sent to CO for mailing list web site distrib		
DTPNAUT	Public notice authorization received from owner		
DT1VIMS	VMRC concurrence on draft permit		

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ATTACHMENT 15

PUBLIC PARTICIPATION