

TENTATIVE AGENDA
STATE WATER CONTROL BOARD MEETING
 THURSDAY, SEPTEMBER 22, 2016

HOUSE ROOM C, GENERAL ASSEMBLY BUILDING
 9TH & BROAD STREETS
 RICHMOND, VIRGINIA 23219

CONVENE – 9:30 A.M.

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ADJOURN

NOTE: The Board reserves the right to revise this agenda without notice unless prohibited by law. Revisions to the agenda include, but are not limited to, scheduling changes, additions or deletions. Questions arising as to the latest status of the agenda should be directed to the staff contact listed below.

PUBLIC COMMENTS AT STATE WATER CONTROL BOARD MEETINGS: The Board encourages public participation in the performance of its duties and responsibilities. To this end, the Board has adopted public participation procedures for regulatory actions and for case decisions. These procedures establish the times for the public to provide appropriate comment to the Board for its consideration.

For Regulatory Actions (adoption, amendment or repeal of regulations), public participation is governed by the Administrative Process Act and the Board’s Public Participation Guidelines. Public comment is accepted during the

Notice of Intended Regulatory Action phase (minimum 30-day comment period) and during the Notice of Public Comment Period on Proposed Regulatory Action (minimum 60-day comment period). Notice of these comment periods is announced in the Virginia Register, by posting to the Department of Environmental Quality and Virginia Regulatory Town Hall web sites and by mail to those on the Regulatory Development Mailing List. The comments received during the announced public comment periods are summarized for the Board and considered by the Board when making a decision on the regulatory action.

For Case Decisions (issuance and amendment of permits), the Board adopts public participation procedures in the individual regulations which establish the permit programs. As a general rule, public comment is accepted on a draft permit for a period of 30 days. If a public hearing is held, there is an additional comment period, usually 45 days, during which the public hearing is held.

In light of these established procedures, the Board accepts public comment on regulatory actions and case decisions, as well as general comments, at Board meetings in accordance with the following:

Regulatory Actions: Comments on regulatory actions are allowed only when the staff initially presents a regulatory action to the Board for final adoption. At that time, those persons who commented during the public comment period on the proposal are allowed up to 3 minutes to respond to the summary of the comments presented to the Board. Adoption of an emergency regulation is a final adoption for the purposes of this policy. Persons are allowed up to 3 minutes to address the Board on the emergency regulation under consideration.

Case Decisions: Comments on pending case decisions at Board meetings are accepted only when the staff initially presents the pending case decision to the Board for final action. At that time the Board will allow up to 5 minutes for the applicant/owner to make his complete presentation on the pending decision, unless the applicant/owner objects to specific conditions of the decision. In that case, the applicant/owner will be allowed up to 15 minutes to make his complete presentation. The Board will then allow others who commented during the public comment period (i.e., those who commented at the public hearing or during the public comment period) up to 3 minutes to respond to the summary of the prior public comment period presented to the Board. No public comment is allowed on case decisions when a FORMAL HEARING is being held.

Pooling Minutes: Those persons who commented during the public hearing or public comment period and attend the Board meeting may pool their minutes to allow for a single presentation to the Board that does not exceed the time limitation of 3 minutes times the number of persons pooling minutes, or 15 minutes, whichever is less.

New information will not be accepted at the meeting. The Board expects comments and information on a regulatory action or pending case decision to be submitted during the established public comment periods. However, the Board recognizes that in rare instances, new information may become available after the close of the public comment period. To provide for consideration of and ensure the appropriate review of this new information, persons who commented during the prior public comment period shall submit the new information to the Department of Environmental Quality (Department) staff contact listed below at least 10 days prior to the Board meeting. The Board's decision will be based on the Department-developed official file and discussions at the Board meeting. In the case of a regulatory action, should the Board or Department decide that the new information was not reasonably available during the prior public comment period, is significant to the Board's decision and should be included in the official file, the Department may announce an additional public comment period in order for all interested persons to have an opportunity to participate.

PUBLIC FORUM: The Board schedules a public forum at each regular meeting to provide an opportunity for citizens to address the Board on matters other than those on the agenda, pending regulatory actions or pending case decisions. Those wishing to address the Board during this time should indicate their desire on the sign-in cards/sheet and limit their presentations to 3 minutes or less.

The Board reserves the right to alter the time limitations set forth in this policy without notice and to ensure comments presented at the meeting conform to this policy.

Department of Environmental Quality Staff Contact: Cindy M. Berndt, Director, Regulatory Affairs, Department of Environmental Quality, 629 East Main Street, P.O. Box 1105, Richmond, Virginia 23218, phone (804) 698-4378; e-mail: cindy.berndt@deq.virginia.gov.

Reissuance of a Virginia Pollutant Discharge Elimination System Individual Permit Dominion – Chesterfield Power Station – VA0004146, Chesterfield County: The Dominion – Chesterfield Power Station is an existing 1750 megawatt (MW) coal fired and natural gas and oil fired steam electric generating station. The facility began operation in 1945 and continues to burn coal today. Two ash ponds (Upper and Lower) remain on site. Coal combustion residuals (CCRs) are conveyed from the boilers to treatment/disposal units by wetting down the ash and sluicing the mixture to the Lower Ash Pond, which provides settling for the ash and treatment for other low volume waste streams generated by the facility. Solids dredged from the Lower Ash Pond are placed in the Upper Ash Pond and further dewatered. The applicant is proposing to close both ash ponds on site pursuant to a 2015 United States Environmental Protection Agency final Rule that regulates the disposal of CCRs. It should be noted that the requirements for closure will be addressed through the Virginia Solid Waste Management Regulations. The VPDES reissuance primarily addresses the industrial wastewater and stormwater discharges associated with the closure of the facility’s ash ponds. The facility also requested additional changes to the permit that are not related to the closure of the ash ponds.

Pursuant to Section 62.1-44.15:01 of the State Water Control Law, the public notice is to be mailed to the chief elected official and chief administrative officer and planning district commission. By letter dated June 6, 2016, DEQ notified the Chesterfield County Administrator, the Chesterfield County Board of Supervisors, and the Richmond Regional Planning District Commission.

Public notice of the draft permit and public hearing was published in the *Richmond Times Dispatch* on June 6, 2016, and June 13, 2016, and in *Style Weekly* on June 8, 2016, and June 15, 2016. A 45-day public comment period ran from June 6, 2016, through July 21, 2016. During this period, there were 730 commenters, some of whom submitted multiple comments.

In addition, DEQ hosted an informational meeting on June 22, 2016, concerning the closure of the coal ash ponds at the Dominion - Chesterfield Power Station. Approximately 40 citizens attended.

DEQ held the public hearing at 7:00 p.m. on July 6, 2016, at the Thomas Dale High School West Campus in Chesterfield, Virginia. Mr. Robert Dunn served as the hearing officer. DEQ also hosted an informational session prior to the hearing so that questions could be asked and answered prior to the hearing. Approximately 75 people attended the public hearing. Eighteen (18) citizens provided oral comments during the public hearing.

Summary of Comments and DEQ Response:

Staff reviewed all comments submitted during the public comment period. A summary of the comments received along with responses prepared by staff are found within this response to comments document. Where possible, comments were summarized according to issue.

All comments received in response to this permitting action are available upon request.

Elected Official Comments

Senator Amanda Chase (11th Senatorial District) submitted an e-mail during the comment period, in which she expressed her concern that the draft permit has the potential to impact her constituency as well as resources that are important to all Virginians, including the James River and Henricus Historical Park. She requested that the information provided by those individuals and organizations that have concerns about water quality standards, be thoroughly reviewed and considered during this permitting process, and that the agency also take into account the needs of the citizens for reliable, cost-effective power, which will affect their overall well-being.

Staff Response: The comments submitted to DEQ during the comment period have been reviewed and the agency response to those comments, including the concerns raised in Sen. Chase’s e-mail, comprises the remainder of this document.

Many of the comments expressed in opposition to this proposed permit action (including the entire substance of “Form Letter 1”) were premised on objections to the proposed conversion of the Lower and Upper Ash Ponds to solid waste storage facilities. This proposed conversion would be regulated under independent permit actions that are being developed by DEQ’s Land Protection and Revitalization Division; as such, the objections described above are not relevant to this draft permit. However, regardless of the method of closure, the ash ponds would have to be dewatered and the proposed VPDES permit would remain as is.

Other commenters objected to the draft permit on the bases of sea level rise or greenhouse gas emissions from the plant; as the VPDES Permit Regulation does not regulate these, the draft permit has not been modified in response to these comments, per the staff responses in this document.

The remaining comments were grouped and summarized according to issue where possible below.

1. Coal Ash Pond Closure – Dig up and remove the ash, owing to groundwater concerns or the flooding risk associated with storm surges or sea level rise (Southern Environmental Law Center (SELC), James River Association (JRA), Hands Across the Lake (HAL), Henricopolis Soil and Water Conservation District (SWCD), Form Letter 1, Suzanne Keller,

Carolyn Crighton, Evie Scott, Bill Johnson, Annique Dunning, Frances Broaddus-Crutchfield, Glenn Besa, Tyla Matteson, Herb Walke, Peter Martin, Graham Jennings)

Staff Response:

Closure of these impoundments is governed by and addressed by the 2015 EPA Final Rule on the Disposal of Coal Combustion Residuals. Closure, including the method of closure, will be addressed in a future solid waste permitting action, which will include additional groundwater monitoring, surface water monitoring, and corrective action as necessary. Regardless of the method of closure, it would still be necessary to decant and dewater the ash ponds, and it would still be necessary to develop, install and operate treatment systems to replace the functions currently performed by the Lower Ash Pond; therefore, the draft permit would remain essentially as is.

2. *DEQ has ignored available technology that can significantly reduce pollutant concentrations in wastewater at the Chesterfield Power Station (SELC, JRA, Form Letter 2, Jamie Brunkow, Jonathan Gendzier, Sierra Club, VCN, Henricopolis SWCD, Chris French).* • *The Clean Water Act requires technology-based effluent limitations as the minimum level of control required by pollution discharge permits.*

- *Federal effluent limitations are inapplicable when they do not include requirements for “pollutants of concern” or when the facility does not “perform the industrial operation triggering” the limitations*
- *DEQ must set technology-based limits on a case-by-case basis where Federal Effluent Limitations are inapplicable to the wastewater streams and contaminants at the CPS*
- *Dewatering a coal ash impoundment in preparation for closure is an aspect of the pond’s operation that is not contemplated by the effluent limitations for legacy coal ash ponds promulgated by EPA.*
- *State WQS provide a “supplementary basis” but are not an adequate substitution for technology-based effluent limitations.*
- *Dominion should be required to meet state public health standards even though it does not discharge into waters designated as a public water supply.*
- *Outfall 101 should be considered a combined wastestream as the Lower Ash Pond currently receives multiple wastestreams; rather than the “standard” 100 mg/L for TSS, a limit should be calculated.*
- *An advanced wastewater treatment plant can effectively treat the wastewater from the Upper and Lower Ash Ponds*
- *Approval of the draft permit should remain pending until the CER for the CSWTS is submitted/reviewed. DEQ must then establish TBELs.*
- *TBELs are achievable at CPS as demonstrated by Dominion’s wastewater treatment systems at Possum Point and Brema power stations.*
- *Dominion should meet the lowest standards agreed upon regarding the Possum Point and Brema discharges*
- *The “trigger levels” above which Dominion shall employ additional control technology should be the effluent limits.*

Staff Response:

DEQ staff disagrees that federal effluent limitations are inapplicable and that DEQ must set technology based limits for this case. The facility is regulated by 40CFR Part 423, Federal Effluent Guidelines and Standards for the Steam Electric Power Generating Point Source Category. Part 423 federal effluent guidelines (FEGs) were promulgated by EPA in 1982, and were recently updated as a final rule in the Federal Register published on November 3, 2015. DEQ staff believes the 1982 and 2015 FEGs satisfactorily apply to the wastewater discharges authorized by the proposed permit, and therefore there is no need to establish or apply case-by-case site-specific technology-based effluent limits to this facility. EPA Headquarters staff, in discussions with DEQ staff, have confirmed that decant and interstitial dewatering discharges associated with the closure of coal ash impoundments are subject to the federal ELGs. The discharge of “legacy” wastewaters are specifically discussed in the preamble to the FEGs, and are regulated as best available technology economically achievable (BAT) at 40CFR §423.13. The Preamble states:

“For purposes of the BAT limitations in this rule, this preamble uses the term ‘legacy wastewater’ to refer to FGD wastewater, fly ash transport water, bottom ash transport wastewater...generated prior to the date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023... Under this rule, legacy wastewater must comply with specific BAT limits, which EPA is setting equal to the previously promulgated BPT [best practicable control technology currently available] limits on TSS in the discharge of fly ash transport water, bottom ash transport water, and low volume waste sources...” While not referred to in the body of the regulation as “legacy” wastewaters, these wastewaters are nonetheless addressed in the federal regulation via subparagraph (1)(ii) of respective subsections 40CFR 423.13(g), (h), (i), (j) and (k). The “as soon as possible” date is to be separately established for each of the eligible waste streams (e.g., FGD wastewaters, fly ash transport wastewaters, and bottom ash transport wastewaters). Dominion’s transition from a “wet” sluicing handling of fly ash and bottom ash transport waters to a “dry” handling system for both at the Chesterfield Power Station is expected to occur prior to November 1, 2018.

Therefore, DEQ staff has determined November 1, 2018 to constitute the “as soon as possible” date for application of the updated 2015 ELGs to both the fly ash and bottom ash transport wastewaters directed to Outfalls 101 and 004. In accordance with 40CFR §§423.13(h)(1)(ii) and 423.13(k)(1)(ii) of the federal rule, fly ash and bottom ash transport wastewaters that are generated *prior* to November 1, 2018 may be discharged *after* November 1, 2018 as “legacy” wastewaters subject to a TSS ELG load limitation. Similar wastewater streams generated *after* November 1, 2018 would be subject to the updated 2015 federal BAT requirements of 40CFR §§423.13(h)(1)(i) and 423.13(k)(1)(i) requiring “no discharge.”

TSS load limitations and footnotes have been correspondingly added to Parts I.A.2 (Outfall 101) and I.A.10 (Outfall 004) to reflect the updated 2015 federal BAT requirements. The Part I.A footnotes are proposed to read, “*There shall be no discharge of bottom ash or fly ash transport wastewaters generated at this facility on or after November 1, 2018. On or after November 1, 2018, any bottom ash or fly ash transport wastewaters generated at this facility prior to that date shall be regarded as legacy wastewaters, which may be discharged in accordance with the TSS load limitations for this outfall. The TSS load limitation shall only apply to legacy fly ash and bottom ash transport wastewaters discharged after November 1, 2018.*” Staff have also reduced the TSS maximum concentration for Outfall 101 to correspond to the combined waste stream TSS concentration at Outfall 004 on the basis that Outfall 101 will be effectively treating the historical wastestreams that have entered the LAP prior to drawdown and dewatering.

DEQ staff has determined the permittee will need additional time beyond November 1, 2018 to plan, design, construct, optimize and commission a biological treatment system to address the FGD wastewater stream directed to Outfalls 302 and 402. Based on documents submitted by the permittee of schedules needed to plan, design, procure, and install equipment; changes being made at the power station in response to the final CCR rule and other recent federal regulations; and a commissioning period, DEQ staff has determined March 29, 2022 to be the “as soon as possible” date for upgrades and optimization of the equipment treating the FGD wastewater stream to be reasonably expected to be completed. The “as soon as possible” effective date of the ELG applying to the FGD wastewater stream is reinforced in the permit by the schedule established in Part I.B.2. FGD wastewaters generated *prior* to March 29, 2022, but discharged *after* March 29, 2022, will qualify as “legacy” wastewaters subject to the federal technology-based TSS effluent guideline established per 40CFR §423.13(g)(1)(ii). DEQ staff believes FGD wastewaters discharged prior to the “as soon as possible” ELG effective date of March 29, 2022 would be addressed by the 1982 federal ELGs that is equivalent to the BPT-based concentration limit times the flow of the FGD wastewater stream. TSS load limitations have been correspondingly added to Parts I.A.6 (Outfall 302) and I.A.12 (Outfall 402) to reflect the updated 2015 federal BAT requirements.

In establishing the BAT limits for legacy wastewaters in its final rule, EPA explicitly rejected technologies other than surface impoundments due to the lack of adequate data, and the way legacy wastewaters are handled at steam electric power generating plants. In considering BAT limits for legacy wastewaters, DEQ is not aware of data of sufficient or defensible robustness to supersede EPA’s rejection of technologies other than surface impoundments, though it should be noted that conversion from a wet ash handling system to a dry ash handling system (and closing the ponds) represents BPT for wet ash handling wastewaters.

Technology-based treatment requirements (Best Professional Judgment) may be developed at the state level in the absence of applicable federal technology-based effluent limits (40CFR 125.3(c)). While DEQ staff believes applicable federal technology-based treatment requirements exist in both the 1982 and 2015 federal ELG rule makings, if the Board were, nonetheless, to set technology-based limitations at the state level, the methodologies to do so are prescribed in the federal regulations at 40CFR 125.3(d), which are the same factors EPA is required to consider in the development of FEGs. Under these regulations DEQ does not have the authority to arbitrarily prescribe treatment technology requirements without going through the appropriate evaluations, including factors such as cost benefit analyses and non-water quality environmental impact (i.e. energy requirements, etc.). Because the EPA has just undertaken this effort as described above, DEQ does not believe that the same exercise at the state level will yield different results; it should be noted that when establishing effluent guidelines for a category of industry, EPA often focuses on “representative parameters”, with the idea that technology installed to treat the “representative parameters” also treats other parameters that may reasonably be expected in the wastestream but do not at this time require their own technology-based limits. While it may be possible to treat the effluent to drinking water quality, DEQ does not have the authority to impose this requirement on the permittee. As outlined in the Reasonable Potential Analyses as documented in the Fact Sheet, the proposed effluent limits will be protective of the Human Health numeric water quality criteria promulgated in the Virginia Water Quality Standards regulations at 9VAC25-260-140. Water-quality based effluent limits (WQBEL) are established on a site-specific basis. Therefore, DEQ staff does not believe it to be appropriate to apply WQBELs established for the Possum Point or Bremono Power Station locations to the Chesterfield Power Station site.

DEQ staff does not believe that setting the numeric effluent limitations equal to the trigger levels is appropriate or warranted, as their intended roles are different. The numeric effluent limitations are established to protect instream water

quality and beneficial uses, whereas the trigger levels are intended to ensure implementation of adequate operational wastewater treatment controls.

DEQ staff does not believe action on this permit warrants delay until a Concept Engineering Report (CER) is submitted and reviewed for the temporary Centralized Source Waste Treatment System (CSWTS) that is anticipated to be installed to treat the dewatering discharges. Requirements addressing CERs, and standard schedules for their submittal, are addressed by special condition Part I.C.20 of the proposed permit. DEQ believes that, with the addition of the above mentioned TSS load limitations, the effluent limits in the proposed permit for Outfalls 101, 302-305, 004, 402 and 005, and utilization of a surface impoundment technology, properly satisfy the 2015 FEG and BAT/BPT requirements. As these internal outfalls discharge to another treatment unit (Low Volume Wastewater Treatment System, aka Outfall 301), treatment above and beyond the aforementioned requirements has already been accounted for.

3. The draft permit does not comply with the Clean Water Act because it authorizes discharges far in excess of water quality standards, instead relying on dilution to meet water quality standards (SELC, JRA, Chesapeake Bay Foundation (CBF), Sierra Club, VCN, Form Letter 2, Form Letter 3, Mabel Kinzie- Berdel, Isabella Pezzulo, Ben Hawkins, Charles Epes, Eugenia Anderson-Ellis, Jessica Sims, Glenn Besa, Jamie Brunkow, Jonathan Gendzier, Drew Gallagher, Chris French).

- *DEQ relies on cooling water and the James River to dilute the concentration of released pollutants.*

This is not sufficiently protective of water quality and allows discharges in excess of WQS in violation of the CWA.

- *DEQ relies on a 2:1 mixing ratio and an assumption of complete mixing – these are not proper assumptions. The permit allows the use of the James River to dilute pollution in lieu of applying best technology economically achievable*

- *DEQ's own permitting guidance says that the use of mixing zones is generally invalid for tidal waters.*

- *DEQ should take note of cumulative/synergistic impacts as a function of the combination of metals, salts, and high temperature.*

- *Dominion should be required to treat water to bring heavy metals to below the known thresholds for biological risk to aquatic life.*

Staff Response:

Permit limits are designed to be protective of the Virginia Water Quality Standards (WQS) which establish the beneficial uses of all waters in the Commonwealth and the narrative and numeric criteria necessary to ensure water quality is maintained and protected. Those beneficial uses include recreation, e.g., swimming and boating; the propagation and growth of a balanced, indigenous population of aquatic life; wildlife; and the production of edible and marketable natural resources (e.g., fish and shellfish). These WQS are adopted as regulation (9VAC25-260 et. seq.), and represent the best available science to ensure protection of water quality.

The WQS include criteria to protect aquatic life from acute (1-hour) and chronic (4 day) exposures. The WQS also include criteria to prevent human health impacts from consumption of fish over a period of years. If the effluent limits that are based on acute and chronic criteria are attained then aquatic life in the receiving waters will be fully protected consistent with the WQS. The WQS (9VAC25-760-20.B) authorizes the Board to use mixing zone concepts in evaluating limitations for VPDES permits, and DEQ and NPDES permitting authorities in other states routinely use mixing zones in writing NPDES permits. Historically, the VPDES permit for the Chesterfield Power Station has included mixing ratios consistent with DEQ guidance for discharges to tidal waters. Outfalls 001 and 002 have historically been assigned default tidal mixing ratios of 50:1 for chronic water quality criteria and 2:1 for acute water quality criteria. In response to public concerns following the Dominion Brema and Possum Point public hearings, DEQ staff reduced the chronic mixing ratio for Outfalls 001 and 002 from 50:1 to 2:1. This is an extremely conservative assumption and provides for this mixing (2:1) within just a few feet of the discharge pipe.

Water Quality Based Effluent Limitations (WQBELs) were developed for Outfall 003 assuming zero dilution or mixing.

This means that Dominion will be required to meet water quality standards (with the exception of Temperature – see item # 8 below) at the point of discharge (i.e., where the cooling channel enters Farrar Gut). WQBELs were developed for Outfall 301 assuming worst-case concentrations and flow volumes from the waste streams constituting Outfalls 302-305, and assuming critical low flows through Outfall 003, into which Outfall 301 will discharge.

The VPDES permit has historically treated Outfalls 004 and 005 as a combined discharge to Farrar Gut and accounted for the dilution provided by the cooling water discharge from Outfall 003. The cooling water discharge provided a dilution factor of 31:1. DEQ staff has reevaluated the mixing of these two outfalls and the draft permit sent to public notice included significantly more stringent mixing assumptions. Outfall 004, at the head of Farrar Gut, has been allowed no mixing for the application of acute and chronic water quality criteria. Likewise, mixing ratios for Outfall 005 near the mouth of Farrar Gut have been reduced from 31:1 to 2:1 for both acute and chronic water quality criteria. The reduction in mixing assumptions for Outfall 004 resulted in new WQBELs, for which a schedule of compliance has been added to the permit.

For the drawdown and closure of the Upper and Lower Ash Ponds, Dominion proposes to eliminate the discharges from Outfalls 004 and 005, install a wastewater treatment system in accordance with Special Condition No. 21 of the VPDES permit and discharge via Outfall 101. Outfall 101 is a new internal outfall that will discharge to the James River via existing cooling water Outfalls 001 and 002. WQBELs were developed for the drawdown/dewatering of the Lower Ash Pond and Upper Ash Pond using the same 2:1 tidal mixing ratios now assigned to Outfalls 001 and 002. It should be noted that Outfall 101 will comingle with the cooling water discharges in either Outfall 001 or 002 prior to discharge. The dilution provided by the cooling water flows greatly exceeds the 2:1 ratio assumed for Outfall 101.

The cumulative impacts of pollutants other than temperature are addressed by the Whole Effluent Toxicity (WET) limitations included on Outfalls 101 and 004. Vertebrate and invertebrate species are placed in various concentrations of the effluent to establish whether or not there are any acute or chronic impacts on the species. The impact of temperature is not addressed by the WET limit because the standardized test protocols must be applicable to a variety of discharges and must be repeatable by any certified laboratory facility. Temperature impacts of the discharge are limited by the heat rejection limitations on Outfalls 001, 002 and 003 in conjunction with the 316(a) Thermal Variance addressed in item #8 below.

4. The draft permit fails to require effluent limit guideline compliance “as soon as possible” (SELC, JRA, Sierra Club, VCN, Jonathan Gendzier, Chris French)

- *The permit requires Dominion to come into compliance with final limits within four to six years. There is no support that this time frame is “as soon as possible”.*
- *Dominion should be required to report its progress more frequently than semi-annually.*
- *Randall Grachek (wastewater engineer) says Dominion can install a system and achieve compliance by late 2017/early 2018 at the latest. DEQ must require shorter timeframe (July 2018)*
- *DEQ should evaluate interim treatment. DEQ should consider use of the dewatering treatment system to treat FGD purgewater (402) until the FGD WWTP is built.*

Staff Response:

As part of the update to Part 423 federal effluent guidelines (FEGs), published in the Federal Register on November 3, 2015, EPA defined “as soon as possible” as “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 regulations of this part. (2) Changes being made or planned at the plant in response to... (iii) Regulations that address the disposal of coal combustion residuals as solid waste... (3) For FGD wastewater requirements only, an initial commissioning period for the treatment system to optimize the installed equipment. (4) Other factors as appropriate.”

“As soon as possible” is established independently for each waste stream and varies from November 1, 2018 (ash transport ELG) to March 29, 2022 (flue gas desulphurization ELG) as documented in the Fact Sheet. DEQ has issued a Solid Waste permit for the construction and operation of an industrial landfill, as part of the conversion of the facility from wet ash handling to dry ash handling, and will be developing other solid waste permits for the conversion of the Lower and Upper Ash Ponds from wastewater treatment units to solid waste disposal units. As the Lower Ash Pond is currently utilized to provide wastewater treatment to several waste streams in addition to the wet handling of ash, Dominion has submitted documentation to DEQ outlining the scheduling of multiple construction activities necessary to complete the conversion of the ash handling while providing wastewater treatment to existing waste streams, as well as to meet the effluent limit guidelines promulgated in the November 3, 2015 Federal Register. DEQ believes the compliance dates and interim operating and reporting requirements in the permit are appropriate and fulfill the requirements of the federal regulations.

5. The permit contains insufficient monitoring requirements (SELC, JRA, CBF, Sierra Club, VCN, BREDL, Isabella Pezzulo, John Flannery, Glenn Besa, Jason Mullins, Tom Burkett).

- *004 and 005 should have daily monitoring of flow and chemical constituents at appropriate quantification levels for all parameters at all times (not just during dewatering). Monitoring results should be submitted to DEQ within 1 day of sampling.*
- *DEQ should require discharge data/sampling at all process and stormwater discharge outlets after 0.25” of rainfall.*
- *001 and 002 should be monitored for coal ash metals*
- *301, 302, 303, 304 - Insufficient monitoring frequency.*
- *Interim limits: Monthly monitoring is insufficient. Should be twice weekly*
- *Final limits (where monthly average and daily max are set): Monthly monitoring is wholly inadequate. Should be daily.*
- *Monitoring for Bromides or trihalomethanes should be required at all industrial-influenced outfalls at CPS*
- *Increased bromides have been observed at public drinking water intakes where FGD systems are installed upstream.*
- *DEQ should confer with downstream drinking water utilities that may be affected*

- 004 and 101 – Heavy Metals and other parameters with monthly and/or daily max limits should be monitored daily. Parameters with no limit should be monitored twice weekly.
- 402 - Parameters with monthly and/or daily max limits should be monitored daily. Parameters with no limit (including interim limits) should be monitored twice weekly.
- 005 should have at least all the limits of 004. Parameters with monthly and/or daily max limits should be monitored daily. Parameters with no limit (including interim limits) should be monitored twice weekly.
- WET testing requirements in the permit are inadequate. Should occur prior to, and three times per week, during drawdown and dewatering; results to be submitted to DEQ within 1 day of testing and made public.
- More sensitive species reflecting the sensitivity of local fauna should be used for the WET testing.
- Third party monitoring (or third party verification) of all test results should be required. Data (including historic data) should be shared with the public.
- Final permit should mandate baseline sampling (and ongoing sampling) of James River and Farrar Gut for water quality, sediment quality, ecological health, and fish tissues.

Staff Response:

Consistent with DEQ guidance, the VPDES permit has historically had 1/Month or 2/Month monitoring for most parameters with the exception of nutrients and Total Residual Chlorine. This monitoring frequency is typical of continuous process wastewaters. In response to public input on the VPDES permits for the Bremo and Possum Point Power Stations, monitoring for the dewatering of the ash ponds (Outfall 101) was increased to 3/Week. Additionally, the permit requires that (1) samples be processed within four business days, (2) sample results be reported to DEQ weekly, (3) inline process samples be taken a minimum of once every four hours and (4) the permittee immediately cease the discharge upon receipt of results in exceedance of permit limitations. In light of the operational and compliance history of the dewatering operations at both the Bremo and Possum Point Power Stations, DEQ staff believes that the proposed interim and final monitoring and reporting requirements for Outfalls 004, 005 and 101 are appropriate. Most stormwater discharges from this site are permitted through a separate industrial stormwater general permit (see 9VAC25-151). Stormwater sources addressed by this individual permit are comingled with multiple other wastestreams prior to treatment and discharge. Sampling frequencies for Outfalls 301, 302, 303 and 304 have been established that reasonably assess the permittee's performance and effectively evaluate the potential impact on the receiving stream. Outfalls 302, 303 and 304 are all individually treated waste streams which in turn discharge to the low volume treatment system and ultimately Outfall 301. These internal outfalls generally include weekly final limitation monitoring requirements for the major parameters of concern. Federal regulations require that all pollutants limited in industrial NPDES permits include both monthly average and daily maximum limitations. This requirement is not a determination that all parameters must be monitored daily to establish compliance. DEQ staff has evaluated the potential impact of all waste streams and believes that the proposed monitoring frequencies are appropriate. Monitoring for both bromides and trihalomethanes are required by the EPA form 2C submitted in support of the permit reissuance. Although DEQ has no WQS for Total Bromides, effluent data for four trihalomethanes (Chloroform, Bromoform, Dichlorobromomethane and Chlorodibromomethane) were evaluated for compliance with the water quality criteria for human health and no potential for exceedance of the water quality criteria was determined to exist. Although the discharge is not to a section of the river designated as a public water supply, a review of the available online Water Quality Reports for the Virginia-American Water Company located approximately 20 miles downstream indicates that the facility is in compliance with the MCL for Total Trihalomethanes. As Outfalls 001 and 002 consist of once-through cooling water, sampling for coal ash constituents would only be of use during the pond closure activities, and the permit already requires such monitoring at Outfall 101. Outfall 005 does not require the same monitoring as Outfall 004 because unlike the Upper Ash Pond (005), the Lower Ash Pond currently performs wastewater treatment for the low-volume waste sources on site.

The permit requirements for both chemical and biological testing stipulate methods that are consistent with other VPDES permits issued by DEQ and have been previously approved by the EPA during draft permit review. DEQ strives to ensure that the monitoring requirements of the permit will demonstrate whether a facility's effluent complies with the limits contained in the permit, and that the monitoring is performed in a scientifically sound manner. In particular, concerns about the synergistic effects of multiple pollutants (whether or not the pollutants are limited by the permit or are even addressed by water quality standards) should be satisfactorily addressed by the requirements for whole effluent toxicity testing. Whole effluent toxicity testing is performed on vertebrate and invertebrate species using the most sensitive species commercially available and representative of the receiving stream. The selection of the *Pimephales promelas* (fathead minnow) and *Ceriodaphnia dubia* (water flea) are appropriate for testing for the tidal freshwater James River.

The VPDES program is a self-monitoring program under the Clean Water Act. The DEQ performs inspections of facilities and collects samples from the facility as necessary. VPDES permittees are also required to submit monthly Discharge Monitoring Reports (DMRs) to DEQ. These monitoring reports contain summaries of the facility's self-monitoring results, and are reviewed by the DEQ's compliance staff. All DMR results are public records which can be provided upon

request. DEQ will also post the results of the coal ash pond dewatering monitoring program on their website weekly. Staff does not believe ambient monitoring of sediment, water, fish tissue and aquatic communities is necessary. As discussed in the staff response to comments #2 and #3, the effluent limits have been established using very conservative assumptions to protect and maintain the WQS. Accordingly, effluent monitoring to demonstrate compliance with the established effluent limits will serve to gage the potential impact of the discharge on the aquatic environment. Additionally, this permitting action addresses dewatering activities required for closure. Closure of these impoundments is governed by and addressed by the 2015 EPA Final Rule on the Disposal of Coal Combustion Residuals and applicable provisions of the Virginia Solid Waste Management Regulations. Closure and post-closure care under those requirements will include groundwater monitoring, associated surface water monitoring, and other measures. The requirements of a solid waste permit will continue to ensure that the facility is not causing any impacts to surface water.

6. *Hazardous materials (e.g. untreated Coal Ash Waste) are currently being discharged into Farrar Gut (SELC, JRA, HAL, Thomas Pakurar, Blue Ridge Environmental Defense League (BREDL), CBF, Tom Burkett, Isabella Pezzulo, Lynn Wilson, Evie Scott, Sue Gier, Bill Johnson, William Dent, Jane Kirchner, John Flannery, Glen Besa, Emilie Rex, Chris French).*

- *Photographs taken by JRA show unpermitted discharges of coal ash (cenospheres) from LAP into Farrar Gut • Investigate the 4/5/16 sample by JRA/HAL, particularly with regard to the cenospheres not settling in the Lower Ash Pond.*
- *If appropriate, suggest legislative changes needed to prevent recurrence.*
- *DEQ should impose more stringent stormwater standards that will aggregate fly ash particles for better management.*
- *Floating buoys blocking the outfall are not adequate for collecting or preventing the waste from entering Farrar Gut*
- *These buoys block public access and allow Dominion to use state waters for collection of its waste.*
- *Permit should require CPS to investigate possible discharge to surface waters from UAP and LAP using Duke Study methodology.*
- *If detected, a treatment process should be submitted to DEQ for approval and be implemented within permit term. Public comment on investigation should be allowed.*

Staff Response:

Upon the conversion of these ponds to solid waste disposal facilities (including the decanting, dewatering and capping), the sources of pollutants that are the object of these comments will be eliminated. Other than stream monitoring performed under strict QAQC protocols included in DEQ's Citizen Monitoring Program, DEQ does not use the results of citizen monitoring to make regulatory decisions. The staff will however evaluate any sampling submitted to DEQ to determine if it indicates any issues that DEQ should evaluate further. Accordingly, DEQ staff has evaluated the results of monitoring performed by a Duke University researcher as well as the James River Association (JRA) in conjunction with Hands Across the Lake.

Duke's sampling at the Chesterfield Power Station was conducted as parts of a broader study of coal ash ponds in the southeastern US, in order to demonstrate the utility of an analytical method. This method evaluated the relative concentrations of isotopes of boron and strontium in coal and coal combustion residuals compared to their normal occurrence in the environment for the purpose of determining whether surface contamination of water bodies could be attributed to groundwater contamination from the coal ash ponds. The study found that concentrations of coal combustion contaminants are higher around coal ash storage facilities than in background samples; however, leaking pond water does not necessarily cause significant contamination, and impacts need to be considered on a case-by-case basis. None of the stream monitoring adjacent to the Chesterfield Power Station exceeded the applicable Virginia water quality criteria. The sample taken from one unidentified pipe adjacent to the Lower Ash Pond did exceed the chronic water quality criteria for Selenium.

Partial sampling results provided by Hands Across the Lake were reported to show water quality violations for Arsenic, Chromium and Lead below Outfall 004. However, laboratory notes regarding the collection and preparation of the sample casts doubt as to whether or not the sample results are representative. The sample results also appear to be total recoverable rather than the dissolved form used to evaluate compliance with water quality criteria. The laboratory name was redacted, eliminating DEQ's ability to follow up on these issues.

In response to the Duke and JRA sampling results, DEQ collected samples on July 28, 2016 using clean metals sampling techniques from Outfall 004 and from locations approximating those listed in the Duke and JRA sampling events. These samples were analyzed for total dissolved and total recoverable metals. The analyses of the in-stream samples showed no exceedance of any metals water quality criteria that are applicable to this reach of the James River. Outfall 004 showed exceedances of water quality criteria for selenium and thallium, both of which are limited in the draft permit and subject to a schedule of compliance.

Several commenters objected to the presence of cenospheres in the discharge from Outfall 004 and the placement of containment booms below the outfall. Cenospheres are sand sized hollow spheres produced as a byproduct of coal

combustion. Cenospheres typically consist of inert silica and alumina and are used in the manufacture of a variety of products. Although no additional permit provisions are proposed, DEQ will work with Dominion to minimize the discharge of cenospheres until the discharge from Outfall 004 is terminated. During a site inspection on August 19, 2016, Dominion was observed staging equipment to collect cenospheres from the surface of the Lower Ash Pond.

7. Objections to the proposed 2'/day drawdown limit on the basis that it risks dam instability (SELC, JRA, VCN, Chris French)

- *2 foot per day drawdown is out of line with drawdown rates for other coal ash ponds – could result in instability and could result in rapid mixing of coal ash sediment and the supernatant.*

- *At all other coal ash sites, DEQ and DCR imposed a six inch per day drawdown rate. DEQ should not tolerate any increased risk of dam instability. DEQ should limit drawdown to six inches per day.*

Staff Response:

The Department of Conservation and Recreation (DCR) Division of Dam Safety has concurred that a 2'/day drawdown does not risk dam instability. The issue of drawdown rate is more a concern when the level of an impoundment fluctuates and the dam does not settle properly during drawdown prior to the pond being refilled; in this case, the drawdown will immediately precede closure of the ponds. The treatment system that will be in place at Outfall 101 will contain design and operational features sufficient to prevent the release of coal ash.

8. The proposed 316(a) Thermal Variance violates the Clean Water Act (SELC, JRA, CBF, Henricopolis SWCD, Sierra Club, VCN, Form Letter 2, Form Letter 3, Mable Kinzie-Berdel, Carolyn Crighton, Jane McKinley, Ben Hawkins, Eugenia Anderson-Ellis, Jane Kirchner, Jessica Sims, John Flannery, Jamie Brunkow, Emilie Rex, Christine Natale) • DEQ cannot rely on a study from 2003 that uses data from 1998

- *2003 study was based on parameters and assumptions that no longer apply (cites changes in temperature and flow rates at CPS)*

- *2003 study relied on four-mile thermal mixing zone (head of Farrar Gut to confluence with James). This mixing zone violates all three subsections of Virginia's mixing zone regulations.*

- *Draft permit assumes the receiving stream for 003 and 004 has same temperature as the effluent because 003 creates free flowing stream characteristics in a tidal water body and is evaluated as if discharging to a dry ditch.*

- *The assumption that the temperature of the effluent (51.7 degrees C – 90th percentile) is equal to the temperature of Farrar Gut is absurd*

- *Farrar Gut is a navigable waterway and not a dry ditch.*

- *There is insufficient evidence in the record to support the reissuance of the variance.*

- *A new study must be performed.*

- *DEQ must include temperature limits rather than aggregate heat rejection limits.*

- *Dominion should cool the discharge water to match the river water prior to discharge.*

- *The permit fails to comply with Virginia's Tier 1 Antidegradation Policy*

- *The draft permit substantially and negatively impacts existing uses. (References 120 degree temperatures from 001-003).*

Staff Response:

DEQ staff disagrees with comments received that the conclusions of the 2003 study assessing the thermal impact of the full load operation of the Chesterfield Power Station on the fish assemblage of the Lower James River cannot be relied upon to re-certify the 2004 §316(a) thermal variance, and that temperature limitations, rather than heat rejection limits, are necessary to assure the protection and propagation of a balanced, indigenous population of fish and wildlife in the receiving stream. Commenters suggested the recertification of the thermal variance be re-considered, and supporting documentation studies be updated, based on recent discoveries of spawning populations of Atlantic Sturgeon, assumptions used to characterize ambient stream conditions, and global warming trends.

Federal regulations promulgating §316(a) thermal variances are addressed at 40CFR §§125.70 through 125.73. 40CFR §125.72(c) states, “Any application for the renewal of a section 316(a) variance shall include only such information...as the Director requests within 60 days after receipt of the permit application.” The application for permit reissuance was initially submitted by Dominion dated May 28, 2009, and received on June 2, 2009. The date of permit application preceded by several years, the National Oceanic and Atmospheric Administration's February 2012 listing of Atlantic sturgeon as an endangered species under the Endangered Species Act. DEQ records of correspondence documents dated within 60 days following receipt of the permit application show no records specifically requesting additional §316(a) renewal information. DEQ staff responded with an application deficiency letter dated June 18, 2009, but this letter did not identify any additional information needs pertaining to the §316(b) variance. Therefore, in accordance with federal regulatory procedures, the permittee is under no further obligation to provide additional updated §316(a) studies or information for this permit reissuance cycle. Upon granting a §316(a) thermal variance, the variance supersedes the mixing zone boundary restrictions found in 9VAC 25-160-20.B.1 and B.2 of the Virginia Water Quality Standards. DEQ

staff finds no regulatory basis to require Dominion to cool the discharge water to match the temperature of the river prior to discharge. Instead, the Virginia Water Quality Standards authorize the use of thermal variances or mixing zones for water to be discharged at temperatures that vary from the receiving waters.

DEQ concurs that Farrar Gut is navigable waters. Zero low flow assumptions were assigned to represent the most conservative mix scenario possible (i.e., if the receiving waters were to consist entirely of effluent). Alternatively, entering low flow assumptions commensurate with receiving waters being available for mix would have resulted in a substantially less conservative risk-based analysis. The thermal discharge from the Chesterfield Power Station has occurred for several decades, and precedes the inaugural 1974 effective date of the Virginia Water Quality Standards regulation and federal Clean Water Act. DEQ staff believes the thermal effluent limits of this permit will maintain and protect those beneficial uses that existed in 1974, and would therefore be in compliance with anti-degradation policies.

Studies that are currently underway by Dominion to develop compliance strategies to address §316(b) cooling water intake structure impingement mortality and entrainment standards may have potential interrelationships to the facility's future management of its thermal discharges. DEQ staff have added language to the proposed permit requiring Dominion to update the 2003 study analyses to support renewal of the §316(a) thermal variance during the next permit cycle. The special condition would establish that the update of the original §316(a) thermal variance study be performed on the same schedule as the §316(b) cooling water intake structure impingement mortality and entrainment studies. Special considerations involving the presence of spawning Atlantic Sturgeon in the vicinity of Chesterfield Power Station would be concurrently addressed by these efforts. It is proposed the §316(a) and §316(b) studies both be submitted 9 months prior to permit expiration allowing for a comprehensive evaluation of any impacts of the Chesterfield Power Station on Atlantic Sturgeon.

9. Objections to impingement/entrainment of aquatic life; illegal impingement of Atlantic sturgeon (no take permit); additional 316(b) requirements are necessary, including the elimination of withdrawal by converting to a closed-loop system (SELC, JRA, CBF, Sierra Club, VCN, Form Letter 2, Jamie Brunkow, Jane Kirchner, Jessica Sims, Chris French)

- *The impingement and entrainment characterization plans were authored before the October 2015 entrainment of two larval Atlantic Sturgeon at CPS. The assessment of the potential for entrainment of early life stages as “unlikely/unexpected” must be reassessed.*
- *DEQ should consider requiring more frequent inspection of the CWIS to assess the need for backwash and/or travelling screen operation – especially during Sturgeon spawning times. 316(b) monitoring should be no less than every three days during operation (rather than weekly).*
- *Dominion should include in its annual report to DEQ on federally listed or endangered species a description of all steps taken in the reporting period to reduce number of organisms taken by impingement/entrainment.*
- *DEQ should require further measures to reduce flow and associated entrainment (referenced FWS recommendations)*
- *DEQ should require a habitat conservation plan in the permit.*
- *DEQ should require BTA.*
- *DEQ should require submittal of studies as they are completed*
- *DEQ should require Dominion to combine the impingement reduction technologies in place with flow reduction for this permit reissuance.*
- *DEQ should require Dominion to retrofit the CPS to include a closed-cycle recirculating system in order to reduce impingement and entrainment and reduce heat pollution*
- *316(b) extension (to 270 days prior to permit expiration) is unreasonable.*
- *DEQ is only required to establish an alternate schedule if the applicant “demonstrates that it could not develop the required information by the applicable date for submission”. Dominion has made no such demonstration.*
- *Closed-cycle cooling is a well-established BTA and EPA’s 316(b) rule was signed over two years ago. Dominion has had plenty of time to prepare for compliance.*

Staff Response:

Under the federal Endangered Species Act (ESA), the National Marine Fisheries Service (NMFS) and the U.S. Fish & Wildlife Service (USFWS) are responsible for the management of federally-listed threatened and endangered (T&E) species. The NMFS has primary management oversight of marine and anadromous fish, including the Atlantic Sturgeon. In accordance with federal regulations at 40CFR §125.98(h), the NMFS and USFWS were afforded two separate opportunities to provide reasonable and prudent recommendations of additional control measures (including monitoring and reporting) for the protection of federal listed species, including any measures to minimize any incidental “take” or likely jeopardy to the listed species: 1) during a 60-day review period of the permit application, as well as 2) during the public comment period of the proposed permit. Neither federal agency identified additional control measures necessary to protect federally-listed T&E species (including the Atlantic Sturgeon) for DEQ’s consideration. The proposed permit includes a special condition (Part I.D.7) that establishes, “Nothing in this permit authorizes take for the purposes of a facility’s compliance with the Endangered Species Act”. DEQ staff believes comments suggesting the facility be

converted to a closed-loop system are premature at this time. The 2014 federal cooling water intake structure (CWIS) rule at 40CFR §125.94 identifies several Best Technology Available (BTA) options to achieve the standards for impingement mortality in addition to closed-cycle re-circulating cooling systems. 40CFR §125.94 also establishes the BTA standard for entrainment to be determined on a site-specific basis after taking into consideration prescribed factors, including changes in particulate emissions, land availability, social benefits and costs, among others. Such analyses are to be based on information submitted in accordance with 40CFR §122.21(r), which has not been fully developed. Part I.D.3 of the proposed permit requires submittal of the 40CFR §122.21(r) information for evaluation prior to the next permit cycle. DEQ staff believes it is therefore premature to conclude that the final BTA for this facility to be closed-cycle cooling, absent of the fully developed supporting 40CFR §122.21(r) documentation.

Comments urging direct and indirect benefits to T&E species be thoroughly accounted for in any cost and benefit studies are not relevant to this permit action, as such information will be evaluated with the 40CFR §122.21(r) submittals prior to the next permit cycle.

DEQ staff disagrees with comments suggesting the granting of an Alternate Schedule extension (for submittal of the 40CFR §122.21(r) information) to be unreasonable, and to require submittal of study results as they are completed, rather than 270 days prior to permit expiration. 40CFR §125.95(a) of the federal Rule establishes that the submittal of information outlined in 40CFR §122.21(r) is to be made “...when applying for a subsequent permit.” The application for reissuance for this permit cycle was originally due in July 2009, or before promulgation of the current 2014 CWIS Rule. Consequently, Dominion was not in position at the time of their permit renewal application to have developed the requisite information commensurate with the 2014 CWIS Rule. Therefore, DEQ staff believes the granting of an Alternate Schedule to have been reasonable.

9VAC25-31-100.E establishes a duty to re-apply at least 180 days before the expiration date of the existing permit. 9VAC25-31-70 allows for continuation of expiring permits so long as the permittee has submitted a timely and complete application for a new permit. As mentioned above, the submittal of the 40CFR §122.21(r) information is to be made when applying for a subsequent permit. The submittal deadline proposed in Part I.D.3 was established at 270 days prior to permit expiration to provide a buffer for the permittee to ensure their reissuance application (with the additional 40CFR §122.21(r) information) has an opportunity to be deemed complete by DEQ staff in time to remain eligible for permit administrative continuance, if subsequently needed. DEQ staff believes that requiring the submittal of the 40CFR §122.21(r) reports upon their completion mid-permit cycle, as requested in public comments received, rather than when applying for a subsequent permit, would be inconsistent with the well-established permit renewal application process. DEQ staff believes comments requesting a) facility conversion to a closed-cycle cooling system; b) the CWIS be retrofitted to reduce the screen mesh size to 1 mm; c) the CWIS be retrofitted to reduce through-screen velocities to 0.25 foot-per-second (fps) are not reasonable and prudent for implementation as interim measures at this time. As stated in the preamble to the 2014 cooling water intake rule, “...under 50 CFR 402.14(i)(2), ‘Reasonable and prudent measures, along with the terms and conditions that implement them, cannot alter the basic design, location, scope, duration, or timing of the action and may involve only minor changes.’” The Preamble further mentions, “Installation of closed-cycle cooling is a major design alteration of a facility involving significant design and construction activities (the range of costs associated with closed-cycle cooling is described elsewhere in today’s notice). Because installation of closed-cycle cooling does alter the basic design of a facility and would involve more than minor changes, as described in the Services’ regulations and Handbook, EPA does not expect that installation of closed-cycle cooling would be specified as a measure solely for purposes of minimizing incidental take.”

Mesh sizes of 1 mm and maximum intake velocities of 0.25 fps have been routinely applied in Virginia under the Virginia Water Protection Permit (VWPP) program for a number of years. However, those standards have been applied for new construction or applicant-initiated proposed reconstruction, and not to the retrofitting of existing intake structures where construction activities are not otherwise proposed. To achieve mesh sizes of 1mm and maximum intake velocities of 0.25 fps, alterations would be needed to the intake structure and screens. Such alterations would be expected to involve significant changes in the basic design of the cooling water intake structures in order to maintain sufficient withdrawal volumes for the continued operation of the plant. The continuity equation (Flow, $Q = \text{Cross Sectional Area, } A \times \text{Velocity, } V$) may be used to demonstrate that to maintain an equivalent amount of flow to operate the plant, a reduced intake velocity would necessitate additional cross sectional area; in other words, alterations to the basic design by requiring physical enlargement of the intake structure cross sectional opening. Likewise, smaller mesh sizes may subject the screens to more frequent debris fouling and head loss, reducing the effective cross sectional area for water to pass through, thereby increasing through-screen velocities. Replacement of the screen mesh would require retrofitting of the conventional traveling screens, and corresponding re-evaluation of the performance and design of the screen backwash system and individual catch baskets. The retrofitting would be expected to involve more than minor changes. Consequently, DEQ staff believes the recommendations to reduce screen mesh sizes and intake velocities do not meet the “reasonable and prudent” criteria. DEQ staff believes comments suggesting inspection monitoring of the CWIS (including

the traveling screen and backwash system) be required more frequently than weekly are not warranted. Federal regulations at 40CFR §125.96(e) establish the weekly monitoring frequency for visual or remote monitoring of the CWIS. Virtually all VPDES facilities with surface water cooling water withdrawals greater than 2 million gallons per day are located in the vicinity of T&E habitat, so the presence of a particular T&E species at Chesterfield Power Station is not considered sufficiently unique to warrant a monitoring frequency inconsistent with other Virginia facilities, nonetheless more stringent than federal requirements.

With cooling water intake structures physically located on the bank of the James, as compared to submerged mid-stream, DEQ staff believes comments requesting use of remote monitoring equipment on a routine basis is not warranted, as the CWISs are in nearby vicinity of the plant and can be easily accessed by land.

10. Concerns about groundwater contamination (SELC, JRA, Frances Broaddus-Crutchfield, BREDL, Glenn Besa, Nicole Ellis, Form Letter 3, Herb Walke, Peter Martin, Sofia Melo, Tom Pakurar, Bob Olsen, Tom Burkett, Graham Jennings)

- *DEQ should require groundwater monitoring*
- *DEQ should require more up-to-date test methods to determine leaching from the ash*
- *DEQ must test for radioactive isotopes and for hexavalent chromium*
- *Given that the current closure plans allow the ash storage facilities to remain unlined, it is possible that pollution of groundwater (and subsequently surface water) will continue post-closure. • Current draft provides for 30 years of care – include long-view plan for ongoing site monitoring and care*
- *DEQ should require a comprehensive assessment of corrective action alternatives and their efficacy before allowing closure of the UAP and LAP. Permit should be put off until Dominion conducts sufficient research on residential and commercial water wells near the coal ash ponds. Further third-party testing should occur. (Hearing – Petition)*
- *No permits authorizing closure should be granted until these issues are fully resolved*

Staff Response:

Closure of these impoundments is governed by and addressed by the 2015 EPA Final Rule on the Disposal of Coal Combustion Residuals. Closure and post-closure care, including post-closure care periods under those requirements, will be addressed through the closure under a solid waste permit.

11. General objections to the permit with regard to the maintenance of water quality standards (WQS) and protection of (1) public health (recreational uses) and use of the James River as a drinking water supply (SELC, JRA, Sierra Club, HAL, Caryl Burtner, Jane McKinley, Charles Epes, Eugenia Anderson-Ellis, Mable Kinzie-Berdel, Suzanne Keller, Carolyn Crighton, John Flannery, Sofia Melo, Tom Pakurar, Tom Burkett); (2) aquatic life and threatened and endangered species (specifically the Atlantic Sturgeon) (SELC, JRA, CBF, HAL, Henricopolis SWCD, Sierra Club, VCN, Form Letter 2, Form Letter 3, Mable Kinzie-Berdel, Carolyn Crighton, Jason Mullins, Jane McKinley, Mike Ostrander, John Flannery, Drew Gallagher, Jamie Brunkow, Christine Natale, Chris French); and (3) the health of sustenance fishermen (BREDL, Mike Ostrander).

- *There is a great amount of Recreational Use around the CPS and that should be taken into consideration regarding discharges of heat and pollutants.*
- *Atlantic Sturgeon have been found (and may spawn) near the CPS.*

Staff Response:

Permit limits are designed to maintain the water quality criteria adopted by the State Water Control Board to protect the beneficial uses of all waters in the Commonwealth. These beneficial uses include “...recreation uses, e.g. swimming and boating; the propagation and growth of a balanced, indigenous population of aquatic life, including game fish, which might reasonably be expected to inhabit them; wildlife; and the production of edible and marketable natural resources, e.g. fish and shellfish”. The WQS include additional criteria for the protection of water supply intakes where appropriate (typically 5 miles upstream of a water supply intake. It should be noted that this reach of the James River is not designated as a Public Water Supply, the nearest public water supply intake being located approximately 20 river miles downstream (note that the Jones Neck and Turkey Island cutoffs reduce this distance by approximately half). The WQS are adopted as regulation (9VAC25-260 et. seq.), and represent the best available science to ensure protection of water quality. As there are no human health standards for in-stream temperature, caution signs posted in the vicinity of Farrar Gut represent the best alternative to a water quality based effluent limit.

The Water Quality Standards adopted by the Board are intended to be protective of all aquatic species including those considered to be threatened or endangered. DEQ staff agrees however that the presence of spawning Atlantic Sturgeon in the vicinity of CPS warrants special consideration of the thermal variance and the impingement/previously provisions under Sections 316(a) and 316(b) of the Clean Water Act. See additional discussion under Items #8 and #9 above.

The human health criteria applied in this permit are intended to protect against any human health impacts from consuming fish outside of the very limited mixing zones over the course of an individual’s lifetime. The river segment in question is subject to fish consumption advisories issued by the Virginia Department of Health (VDH) for Kepone and PCBs. DEQ and VDH develop warning signs which are post at public boat landings by the Virginia Department of Game and Inland

Fisheries. See additional comments in response to Item # 3 concerning the application of water quality criteria, limited mixing zones, etc.

12. *DEQ should terminate the permit on the basis that air emissions from the combustion of fossil fuels contribute to global warming (Jane Kirchner, Chris Wiegard)*

Staff Response:

The VPDES Permit Regulation and State Water Control Law do not authorize DEQ to account for air emissions of greenhouse gases in its permitting process.

13. *A public comment period should be required for the review of the Concept Engineering Report to be submitted for the treatment works to be constructed for Coal Ash Pond decanting and dewatering, as well as for any modification of the permit by adding annual concentration limits (CBF)*

Staff Response:

The effluent limits establish the requirements for the permittee to meet and the effluent limits have been the subject of public notice and comment. The Concept Engineering Report (CER) is specifically excluded from the requirement for public notice and public comment pursuant to the Board's Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation when not required to be submitted as part of the permit application.

It should be noted that a final CER cannot be submitted until the final effluent limits have been established through the permitting process. Once final effluent limits are established the permittee is required to submit a final CER for DEQ approval that describes the final selection of treatment technology to be employed to meet effluent limits. DEQ does not prescribe the methodology by which the permittee is to comply with effluent limits.

Regarding the request regarding public notice of additional annual concentration limits, changes in effluent limits (including the addition of limits not previously included in the permit) are already subject to public notification requirements.

14. *Concern about regulation of stormwater, including a request to inspect stormwater BMPs once every three days during closure activities (CBF, HAL)*

Staff Response:

The draft VPDES permit requires that structural BMPs be inspected weekly for structural integrity and operational efficiency during ash pond closure activities. Dominion will be required to register for and comply with the Construction Stormwater General Permit to address the land disturbance activities associated with closure of the wet ponds and construction of the new wastewater treatment facilities to be permitted as Outfalls 301-305. DEQ staff believe that the conditions in the draft permit, the requirements in the Construction Stormwater General Permit and the requirements in the Industrial Stormwater General Permit are sufficiently protective.

15. *Insufficient low-level PCB monitoring (SELC, JRA, Sierra Club, Chris French)*

- *DEQ should require low-level PCB sampling using Method 1668 at all non-cooling water outfalls (101, 301, 302, 304, 004, 401, 402, 005).*

- *The old PCB sampling method cannot detect low-level PCBs – thus there is no support in the record for the conclusion that “the data currently indicated that PCBs are not present in the discharge” and that “this permit should neither cause nor contribute to the impairment” because that data is unable to test properly for PCBs.*

- *Final permit should include two wet PCB samples at least annually for all stormwater-only discharges*

Staff Response:

The permit contains a prohibition of discharges of PCBs as required by the Federal Effluent Guidelines (FEGs) for Steam Electric Power Generating facilities. Compliance with this provision is established by EPA Method 608 which was the approved method in use when the “no discharge” provision of the FEG was developed. Lower level PCB monitoring is now possible using Method 1668 although EPA has yet to promulgate the method for the NPDES permit program. DEQ is using Method 1668 in the development of Total Maximum Daily Loads. The proposed permit requires monitoring of Outfall 301 using Method 1668 in preparation of a PCB TMDL to be completed for this section of the James River. Once the facility has converted to a dry-ash handling system and closed the wet ponds, all process activities not associated with cooling water will be directed to Outfall 301. Testing for PCBs at that outfall, using Method 1668, should establish whether there is an issue with PCBs originating from the process water on the site. Industrial stormwater on the site is regulated under the industrial stormwater general permit (see 9VAC25-151). Prior to development of the PCB TMDL, DEQ intends to require low level PCB stormwater monitoring using Method 1668 on the site in accordance with Part I.A.(1).c.(4)(a) of the industrial stormwater general permit. DEQ agrees that the Method 608 monitoring performed to date is insufficient to determine whether or not the facility is contributing to the impairment and has modified the Fact Sheet accordingly.

16. *Concerns were raised about the discharge of landfill leachate (Henricopolis SWCD, Isabella Pezzulo)*

Staff Response:

As discussed in staff's response to Comment #4, 40CFR Part 423, Federal Effluent Guidelines and Standards for the Steam Electric Power Generating Point Source Category published by EPA as a final rule in the Federal Register on November 3, 2015 applies to discharges from this facility. The new rule establishes effluent limitation guidelines that apply to combustion residual leachate for existing and new sources. "New source" is defined at 9 VAC 25-31-10. This definition applies unless the applicable new source performance standard otherwise defines "new source." The FEG Technical Development Document and final rule refer to new and existing sources in terms of power generating units. §423.15 requires that NSPS apply to any new source as of November 19, 1982. The permittee has four coal fired power generating units that produce combustion residuals, the most recent of which was put in service in May of 1969. Consequently, the combustion residual leachate generated by the proposed landfill is technically considered an existing source under the FEGs. The VPDES Permit Regulation, at 9 VAC 25-31-210 and 220, provides for the establishment of permit conditions, including effluent limitations, on a case-by-case basis, to assure compliance with the requirements of the State Water Control Law. As discussed in the Guidance on Preparing VPDES Permit Limits Memo No. 00-2011, state law does not prescribe the method by which such case-by-case decisions are made but rather indicates that the decision may "consider available or installed technology, the required water quality or any combination of these considerations." New source performance standards recognize that the owners of new sources have the opportunity to incorporate into their operations the best available demonstrated control technologies. The permittee has proposed a new landfill to receive coal combustion residuals upon the facility's conversion to dry ash management. Combustion residual leachate from that landfill will be a new wastestream. The technology required to treat to NSPS standards for combustion residual leachate is also required for the BAT standards for the FGD. Because the permittee is subject to the BAT standards for the FGD wastestream, the necessary treatment technology is available and will be installed at the permitted facility. Consequently, it is the Department's professional judgment to apply NSPS to the combustion residual leachate. Leachate from the recently permitted landfill will be treated by a unit designated in the draft permit to discharge via Outfall 304; DEQ believes that the effluent limits in the draft permit for Outfall 304, and utilization of a surface impoundment technology, properly satisfy the 2015 FEG and BAT/BPT requirements. As this internal outfall discharges to another treatment unit (Low Volume Wastewater Treatment System, aka Outfall 301), treatment above and beyond the aforementioned requirements has already been accounted for.

17. Permit should include a Sediment Reopener to address changes to Phase III Watershed Implementation Plan (WIP) as well as blueprint modifications after 2018 (CBF).

Staff Response: The permit already contains several reopeners that may be germane to sediment loads from the facility, including: "This permit shall be modified or alternatively revoked and reissued if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements." Nutrient and sediment loads that could be attributed to stormwater are currently monitored per the requirements of the Industrial Stormwater General Permit.

18. Permit limits should be established by direct measurements of the pollutants involved as opposed to calculations (HAL)

Staff Response:

WQBELs are developed using a Reasonable Potential Analysis, which by its nature requires a statistical analysis of the discharge, using either collected or assumed data. Where assumed data is used, the analysis includes worst case assumptions about wastewater strength, volume of the discharge and receiving stream conditions.

19. Volume and Rate of Discharge should be reduced (John Flannery)

Staff Response:

The volume of the cooling water discharges is driven by the ambient conditions and cannot be readily limited in the permit without the permittee undertaking other changes to the process. The daily volume of water to be discharged during the decanting and dewatering of the Lower Ash Pond and Upper Ash Pond is limited by the permit and will be significantly lower than was previously allowed in the history of the facility; this flow will eventually be altogether terminated when the ponds are closed. The volume of low-volume process wastes to be discharged after the ponds are closed is also lower than historically permitted, and the daily flow volume is limited by the permit.

Comments 22 - 31 were received from the permittee during the public comment period

20. Dominion requests that the following footnote be included in Part I.A.2: "Both Chromium III and Chromium VI may be measured by the total chromium analysis. The total chromium analytical test QL shall be less than or equal to the lesser of the Chromium III or Chromium VI method QL listed in Part I.C.14.a. If the result of the total chromium analysis is less than the analytical test QL, both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL]."

Staff Response:

The draft permit has been amended to include the following language: “Both Chromium III and Chromium VI may be measured by the total chromium analysis. The total chromium analytical test QL shall be less than or equal to the lesser of the Chromium III or Chromium VI method QL listed in Part I.C.14.a.

If the result of the total chromium analysis is less than the analytical test QL, both Chromium III and Chromium VI can be reported as “<[QL]”, where the actual analytical test QL is substituted for [QL].

If the result of the total chromium analysis is detectable, both Chromium III and Chromium VI shall be reported as the number measured.

If the result of the total chromium analysis exceeds effluent limitations for Chromium III, Chromium VI, or both, the result shall be considered a violation of the respective limitations.”

21. Prior to the discharge of the Low Volume Wastewater Treatment System (LVWWTs) to Outfall 301, there will likely be a period when the LVWWTs is routed to the Lower Ash Pond. To clarify that the effluent limitations of Outfalls 302, 303, and 304 do not become effective during this period, nor do Outfalls 401 and 402 cease to be effective during this period, Dominion requests that the words “the LVWWTs” be replaced with “Outfall 301” in the following sections: I.A.6, I.A.7, I.A.8, I.A.11, I.A.12, I.C.17.c, I.C.17.d, I.C.17.g(2), and I.C.25.

Staff Response:

The draft permit has been edited to include these revisions so as to clarify that the limitations and monitoring requirements for these sections become effective upon the discharge from Outfall 301.

22. To clarify that the limitations in Section I.A.9 become effective following the testing and commissioning of the Coal Pile Runoff Metals Treatment System, Dominion requests that the words “Metals Treatment System” be included after “Coal Pile Runoff”. Further, Dominion requests a footnote be added to the I.A.9 table stating the following:

“Commencement of discharge does not include testing and commissioning of the Coal Pile Runoff Metals Treatment System. The permittee shall notify DEQ within 72 hours of the operational in-service date (commencement of discharge) of the Coal Pile Runoff Metals Treatment System.”

Staff Response:

The draft permit has been edited to include “Metals Treatment System” after “Coal Pile Runoff” in Section I.A.9 for clarification purposes. Additionally, the following has been added as a footnote to I.A.9: “Commencement of discharge does not include testing and commissioning of the Coal Pile Runoff Metals Treatment System. The permittee shall notify DEQ within 72 hours of the commencement of discharge of the Coal Pile Runoff Metals Treatment System.”

23. Dominion requests that I.A.10.d be rewritten as follows for clarification: “See definition of drawdown in Part I.C.24.”

Staff Response:

The footnote has been revised thus, for clarification: “See Part I.C.24 for discharge notification requirements and a definition of drawdown”

24. Permits Section I.A.12 has interim and final limits with 1/month and 1/week monitoring frequencies, respectively, for all parameters except pH, TSS, and Oil and Grease. Dominion requests that similar interim and final monitoring frequencies be incorporated for pH, TSS, and Oil and Grease.

Staff Response:

The monitoring requirements for the aforementioned parameters have been retained as drafted.

25. Section I.C.10.c requires submittal of a sampling protocol for low level PCB monitoring of Outfall 301 within 90 days following reissuance of the permit. Discharge from Outfall 301 is not expected to occur for some time after the effective date. Thus, Dominion requests that this section be reworded as follows: “The sampling protocol shall be submitted to DEQ-Piedmont Regional Office for review and approval at least 30 days prior to the first sample collection.”

Staff Response:

The draft permit language has been changed to reflect submittal at least 30 days prior to the commencement of discharge from Outfall 301.

26. The QL for thallium in Section I.C.14.a is difficult to achieve and should not be necessary during the interim monitoring period for Outfall 004 under Part I.A.10. Thus, Dominion requests that the following sentence be added to the end of Section I.C.14.a: “The QL for Total Recoverable Thallium does not apply to analyses performed to satisfy the interim monitoring requirements of Part I.A.10.”

The requirement in the draft permit has been retained to ensure consistency with other VPDES permits.

27. To clarify that the 72-hour and 24 hour notifications of Section I.C.24 are required prior to and following the initiation of the discharge or drawdown water, respectively, Dominion requests that the first two sentences of this section be reworded as follows: “The permittee shall notify the DEQ Piedmont Regional office at least 72 hours prior to the planned commencement of the discharge of drawdown water in the Upper or Lower Ash Ponds in preparation for pond closure. A second notification to the DEQ Piedmont Regional Office shall be provided within 24 hours after initiating the discharge of drawdown water from the Upper or Lower Ash Ponds.”

Staff Response:

The draft permit has been edited to include this revision for clarification.

28. *Dominion requests that the first annual certification required by Section I.D.5 be required by February 10, 2018.*

Staff Response:

The deadline suggested by Dominion represents the current interpretation of that requirement; therefore, no change to the draft permit is necessary.

29. *Dominion noted the following clerical errors in the permit: Permit Section I.A.3.d should refer to Outfall 002, not Outfall 001. The first annual monitoring period in section I.C.17.g(1) should begin October 1, 2016. The EPA Analysis Number for Beta-Endosulfan in Attachment A should be 608/625.*

Staff Response:

The draft permit has been edited to correct these clerical errors.

Summary of Changes to the Draft Permit Published for Public Comment

Part I.A.2.a – Outfall 101

Loading limits for Total Suspended Solids (TSS) were developed to ensure consistency with the Federal Effluent Guidelines.

Further, the maximum concentration limit for TSS was reduced to reflect the wastewaters historically discharged to Outfall 004.

Part I.A.2.a.(7) – Outfall 101

The following footnote has been added:

“(7) Both Chromium III and Chromium VI may be measured by the total chromium analysis. The total chromium analytical test QL shall be less than or equal to the lesser of the Chromium III or Chromium VI method QL listed in Part I.C.14.a. If the result of the total chromium analysis is less than the analytical test QL, both Chromium III and Chromium VI can be reported as “<[QL]”, where the actual analytical test QL is substituted for [QL]. If the result of the total chromium analysis is detectable, both Chromium III and Chromium VI shall be reported as the number measured. If the result of the total chromium analysis exceeds effluent limitations for Chromium III, Chromium VI, or both, the result shall be considered a violation of the respective limitations.”

Part I.A.2.f – Outfall 101

The following footnote has been added:

“f. There shall be no discharge of bottom ash or fly ash transport wastewaters generated at this facility on or after November 1, 2018. On or after November 1, 2018, any bottom ash or fly ash transport wastewaters generated at this facility prior to that date shall be regarded as legacy wastewaters, which may be discharged in accordance with the above respective Part I.A. subpart requirements for this outfall.”

Part I.A.3.d – Outfall 002

This section incorrectly referenced Outfall 001 instead of 002. This clerical error has been corrected and now reads: “When Part I.A.2 is effective, process wastewater from internal Outfall 101 may be discharged through Outfall 002.”

Part I.A.5.a – Outfall 301

Loading limits for ammonia were added to ensure compliance with the Richmond-Crater Water Quality Management Plan.

Parts I.A.6, I.A.7, I.A.8 – Outfalls 302, 303, 304

The words “the LVWWTS” have been replaced with “Outfall 301” in order to clarify that the effluent limitations in these sections become effective with the discharge from Outfall 301.

Part I.A.6.a – Outfall 302

Loading limits for TSS were developed to ensure consistency with the Federal Effluent Guidelines.

Part I.A.6.a.(3) – Outfall 302

The following footnote was added: “(3) Limitation expressed in three significant figures and is applicable if combustion residual leachate is separately treated and discharged to Outfall 301.”

Part I.A.6.a.(4) – Outfall 302

The following footnote was added: “(4) Limitation expressed in three significant figures and is applicable if combustion residual leachate from the Fossil Fuel Combustion Product (FFCP) Management Facility is directed to the FGD WWTP for treatment and discharge through Outfall 302.”

Part I.A.6.b – Outfall 302

Part I.A.6.b was removed and replaced by the aforementioned footnotes – (3) and (4) – of Part I.A.6.a.

Part I.A.9 – Outfall 305

In order to clarify that the effluent limitations of this Part become effective with the discharge from the Coal Pile Runoff Metals Treatment System, the words “Metals Treatment System” were included after “Coal Pile Runoff”

and the following footnote was included: “(2) Commencement of discharge does not include testing and commissioning of the Coal Pile Runoff Metals Treatment System. The permittee shall notify DEQ within 72 hours of the commencement of discharge of the Coal Pile Runoff Metals Treatment System.”

Part I.A.10.a – Outfall 004

Loading limits for TSS were developed to ensure consistency with the Federal Effluent Guidelines.

Loading limits for ammonia were added to ensure compliance with the Richmond-Crater Water Quality Management Plan.

Part I.A.10.a.(5) – Outfall 004

The following footnote was added: “(5)Effective date for loading limits is November 1, 2018.”

Part I.A.10.d – Outfall 004

This footnote has been edited to clarify the contents of Part I.C.24 and now reads: “d. See Part I.C.24 for discharge notification requirements and a definition of drawdown.”

Part I.A.10.e – Outfall 004

The following footnote was added: “e. There shall be no discharge of bottom ash or fly ash transport wastewaters generated at this facility on or after November 1, 2018. On or after November 1, 2018, any bottom ash or fly ash transport wastewaters generated at this facility prior to that date shall be regarded as legacy wastewaters, which may be discharged in accordance with the above respective Part I.A. subpart requirements for this outfall.”

Parts I.A.11, I.A.11.b, I.A.12, I.A.12.b – Outfalls 401, 402

The words “the LVWWTS” have been replaced with “Outfall 301” in order to clarify that Outfalls 401 and 402 are redesignated as Outfalls 302 and 303, respectively, with the commencement of discharge from Outfall 301.

Part I.A.12.a – Outfall 402

Loading limits for TSS were developed to ensure consistency with the Federal Effluent Guidelines.

Part I.A.13.a – Outfall 005

Loading limits for TSS were developed to ensure consistency with the Federal Effluent Guidelines.

Part I.C.10.c – Low Level PCB Sampling for Internal Outfall 301

The deadline for submittal of a sampling plan was modified and now states: “c. The sampling protocol shall be submitted to DEQ-Piedmont Regional Office for review and approval at least 30 days before the commencement of discharge from Outfall 301.”

Part I.C.17.c – Whole Effluent Toxicity (WET) testing - Outfall 003

The word “Pre-LVWWTS” has been replaced with “Pre-Outfall 301” to clarify that the WET limits are effective prior to the discharge from Outfall 301.

Part I.C.17.d – Whole Effluent Toxicity (WET) testing - Outfall 003

The word “LVWWTS” has been replaced with “Outfall 301” to clarify that the WET limits are effective after the commencement of discharge from Outfall 301

Part I.C.17.g -Whole Effluent Toxicity (WET) testing reporting schedule

This section included a clerical error that has been corrected to clarify that the 1st Annual Monitoring Period begins October 1, 2016.

Part I.C.24 – Ash Pond Closure Discharge

This section has been edited to clarify that the 72-hour and 24-hour notification requirements are required prior to, and following, the initiation of the discharge of drawdown water from the Upper or Lower Ash Ponds and now reads: “The permittee shall notify the DEQ Piedmont Regional Office at least 72 hours prior to the planned commencement of the discharge of drawdown water in the Upper or Lower Ash Ponds in preparation for pond closure. A second notification to the DEQ Piedmont Regional Office shall be provided within 24 hours after initiating the discharge of drawdown water from the Upper or Lower Ash Ponds. Closure activities as addressed in this permit shall begin with the commencement of drawdown of the Lower or Upper Ash Ponds, whichever occurs first and conclude with the completion of dewatering. Drawdown shall be defined as the intentional lowering of the pond elevation below 2 feet 2 inches from the top of the concrete outfall structure for Outfall 004 and 15 feet 6 inches from the top of the concrete outfall structure for Outfall 005.”

Part I.C.25 – Notification of Commencement of Discharge

The words “the LVWWTS” have been replaced with “Outfall 301” to clarify that the written notification requirements are required 10 days prior to the commencement of the discharge from Outfall 301.

Part I.C.29 – §316(a) Alternate Effluent Limitations

This special condition has been added requiring Dominion to submit to DEQ for approval a detailed plan to update the studies to support renewal of its §316(a) demonstration.

Attachment A for Outfall 301

The EPA Analysis Number listed for Beta-Endosulfan was edited to correct a clerical error and now specifies 608/625.

General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia (9 VAC 25-820): This is a final regulation. The staff will ask the board to approve the regulation reissuing the General VPDES Watershed Permit for Total Nitrogen and Total Phosphorous Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia.

Public Comment: A public comment period was held from December 14, 2015 through February 12, 2016. A public hearing was held on January 21, 2016 at Department of Environmental Quality's (DEQ) Piedmont Regional Office in Glen Allen. No comments were received during the public hearing. Seven comment letters were received in addition to an objection letter provided by the Environmental Protection Agency (EPA). A summary of the comments received and the agency response is included in the Town Hall Agency Background Document (Form TH-09).

Participatory Approach/Technical Advisory Committee: DEQ used a participatory approach to develop this regulation. A 10-person Technical Advisory Committee (TAC) was formed to assist the department in the reissuance of the VPDES watershed general permit. The TAC's primary responsibility was to collaboratively contribute to the development of a VPDES watershed general permit that is in the best interests of the Commonwealth as a whole. The TAC met three times (May 4, June 9, and July 1, 2015) to discuss the development of the regulation.

Background: This action is to approve the reissuance of the General VPDES Watershed Permit for Total Nitrogen and Total Phosphorous Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia. The current general permit expires on December 31, 2016.

Issues: The significant changes to the general permit regulation made prior to the public comment period are as follows:

1. Definitions and grammatical changes were added to provide clarity within permit.
2. Added a new section (15) to update all references to Title 40 of the Code of Federal Regulations published as of July 1, 2014.
3. Require submittal of a compliance plan by July 1, 2017 for facilities identified in 9VAC25-820-80 and subject to a limit effective date after January 1, 2017 as defined in 9-VAC25-820-70 I C 1. This change in combination with the changes in the sections referenced above requires a compliance plan from the Hampton Roads Sanitation District James River facilities for Total Nitrogen reductions identified in Virginia's Phase I Watershed Implementation Plan as well as Appendix X to the Chesapeake Bay TMDL.
4. "Water Quality Improvement Fund" replaced with "Nutrient Offset Fund" to reflect current state code (§10.1-2128.2)
5. Changed the effective (2017) and expiration (2021) dates to reflect the reissuance date of the permit.
6. The language restricting the ability of aggregate facilities not subject to waste load allocations in the Water Quality Management Planning Regulation (9VAC25-720-50.C thru 120.C) to generate credits has been stricken to reflect the same provision being stricken from the Code of Virginia. The effect is that smaller, "non-significant" dischargers can generate credits and fully participate in the trading program.
7. References to the York River Phosphorus schedule of compliance have been deleted as this schedule will have been completed prior to the effective date of the reissued general permit. Effective dates for James River Phase 2 Total Nitrogen (January 1, 2022) and James River Phase 2 Total Phosphorus (January 1, 2017) waste load allocations are established for the new waste load allocations included in 9VAC25-820.80. No schedule of compliance is established for the new Total Phosphorus waste load allocations because the watershed aggregate waste load is currently being met and §62.1-44.19.14.C.2 of the Code of Virginia requires compliance with the new waste load allocations as soon as possible.
8. The reference to 9VAC25-820-70 was replaced with "9VAC25-820-80" and compliance date updated from 2012 to "2017" to reflect location of listing of facilities subject to a compliance schedule and the reissued permit term.
9. The term "Water Quality Improvement Fund" was replaced with "Nutrient Offset Fund" to reflect current state code (§10.1-2128.2).
10. Sample collection frequencies were modified to require more frequent sampling at certain facilities. A new sampling frequency of "2/Week" was established for facilities designed to discharge between 5.0 and 19.999 Million Gallons per Day (MGD). A new sampling frequency of "4/Month" was established for facilities designed to discharge between 0.5 and 0.999 MGD. These increased monitoring frequencies were made to more accurately quantify the annual nutrient loads from these facilities and to reflect the minimum monitoring frequency typically necessary for process control.

11. Clarification was provided on the handling of total phosphorus data below the quantification level (QL). The proposed permit requires that values below the QL be treated as one half of the QL. The previous permit indicated that these values should be treated as one half of the QL.
12. New maximum quantification levels were added for nitrogen parameters to eliminate the possible gaming of the permit language. Without this change the treatment of total nitrogen data below the quantification level would allow a party to report lower than actual total nitrogen loads by choosing higher quantification levels.
13. Added the provision to allow for public comment on any proposed nonpoint source-to-point source trading ratio less than 2:1 allowed by new provisions under 9VAC25-820.II.B.1.b.(1).
14. Updated prices of TN and TP credit purchases from the Water Quality Improvement Fund.
15. Changes were made to reflect the transfer of the responsibility to certify nonpoint source credits from the Department of Conservation to the Department of Environmental Quality as well as the allowance of nonpoint source-to-point source trading ratios less than 2:1 under limited circumstances. The application of the provision for nonpoint-to-point source trading ratios less than 2:1 is subject to public comment and is expected to occur very rarely.
16. A wholesale replacement was made to Section 70.III Conditions Applicable to all VPDES Permits to replace outdated language and to ensure consistency with other general VPDES permits as well as 9VAC-31-190 Conditions applicable to all permits.
17. Eliminate the York River TP waste load allocations as they are now incorporated in 9VAC25-720 (Water Quality Management Planning Regulation) and includes reduced TN and TP waste load allocations for James River Basin dischargers in accordance with the Commonwealth of Virginia Chesapeake Bay TMDL Phase I Watershed Implementation Plan dated November 29, 2010. This includes establishing individual TP waste load allocations for the James River dischargers.

Minor changes were made following the public comment period in response to the comments received. These changes served to clarify existing permit conditions and did not include any substantial changes. These modifications include:

16. Deletion of an artifact from boilerplate language used during the development of the regulation in Section 70.III. C.
17. Added “James River” in response to a comment and to clarify that only James River facilities were subject to the detailed WLA reductions in Section 80.

Impact: Approximately 161 facilities are currently registered under the watershed general permit. This number is expected to grow as most new or expanding facilities are also required to register under the permit and offset any increase in nutrient loading. The ability to trade under the watershed general permit provides additional compliance assurance and allows new and expanding facilities to offset any new nutrient loads under the TMDL load cap.

Amendments to the Erosion and Sediment Control Regulations 9VAC25-830: The 2016 General Assembly made statutory changes to the Erosion and Sediment (E&S) Control Law to clarify that the exemptions to the new water quantity requirements for E&S control are the same as the exemptions under the Virginia Stormwater Management Program (VSMP) Regulations. These E&S statutory changes are set forth in Chapter 66 of the 2016 Acts of Assembly (SB598).

Amendments to the Erosion and Sediment Control Regulations are necessary to comport with this legislative change. The amendments clarify that erosion and sediment control plans approved on and after July 1, 2014, and that are in accordance with the grandfathering or time limits on applicability of approved design criteria provisions of the Virginia Stormwater Management Program (VSMP) Regulations are authorized to continue to utilize the old water quantity requirements for flow rate capacity and velocity under the Virginia Erosion and Sediment Control Program.

CODE SECTION	STATUTORY CHANGE	DRAFT REGULATORY REVISION
§ 62.1-44.15:52	For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements of this subsection shall be satisfied by compliance with water quantity requirements in the Stormwater Management Act (§ 62.1-44.15:24 et seq.) and attendant regulations, unless such land-disturbing activities (a) are in accordance with the grandfathering <i>or time limits on applicability of</i>	9VAC25-830-40. Definitions. m. For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements of § 62.1-44.15:52 A of the Act and this subsection shall be satisfied by compliance with water quantity requirements in the Stormwater Management Act (§ 62.1-44.15:24 et seq. of the Code of Virginia) and attendant regulations, unless such land-disturbing activities (a) are in accordance with

	<p><i>approved design criteria</i> provisions of the Virginia Stormwater Management Program (VSMP) Permit Regulations or exempt, <i>in which case the flow rate capacity and velocity requirements of this subsection shall apply, or (b) are exempt</i> pursuant to subdivision C 7 of § 62.1-44.15:34.</p>	<p><u>provisions for time limits on applicability of approved design criteria in 9VAC25-870-47 or grandfathering in 9VAC25-870-48 of the Virginia Stormwater Management Program (VSMP) Regulation or are exempt, in which case the flow rate capacity and velocity requirements of § 62.1-44.15:52 A shall apply, or (b) are exempt</u> pursuant to subdivision C 7 of § 62.1-44.15:34 of the Act.</p>
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Facilities in Significant Noncompliance: The Department is currently switching to a new platform for its environmental data system. While module design and testing is ongoing, data upload for the SNC report has been impacted. That being the case staff proposes to delay providing the SNC report for the quarter ending March 31, 2016 until the Board’s December meeting at which time staff will present reports for both the March and June 2016 quarters.

Round Hill Investors, LLC, Round Hill (Loudoun County) - Consent Special Order w/ Civil Charges: The Round Hill Subdivision (Site) owned by Round Hill Investors, LLC (Permittee) consists of a 814-acre residential development involving the construction of road infrastructure, utilities and single family dwellings throughout six (6) parcels: Mountain Valley, Greenwood Commons, Lake Point, West Lake, Fields and Upper Lakes located north and south of Route 7, approximately 1,500 feet east and west of Route 719 in Round Hill, Virginia, located in Loudoun County, Virginia. A Virginia Water Protection (VWP) Individual Permit No. 02-0333 for site impacts was authorized by DEQ on December 9, 2002, and expires on December 8, 2017. The Permit authorized the total impact of 6.21 acres of surface waters, consisting of permanent impacts total 5.92 acres of wetlands, and 1,864.43 linear feet of unnamed intermittent streams to North Fork Goose Creek and Sleeter Lake. Temporary impacts total 0.29 acre and 22.87 linear feet of unnamed intermittent streams to North Fork Goose Creek and Sleeter Lake. Compensatory mitigation for these impacts will include wetland creation (9.85 acres), and buffer restoration and preservation (2,644.91 linear feet). On April 23, 2014 and on June 30, 2014, DEQ inspected the Site. On July 1, 2014 a compliance file review was conducted. In response to the site visits and file review, DEQ issued a Notice of Violation (NOV), dated July 30, 2014, to the Permittee. The violations listed in the NOV are as follows:

1. The unauthorized permanent impacts to approximately 1.72 acre of wetlands and approximately 439 linear feet of stream channel.
2. Round Hill staff failed to flag wetlands in order to prevent disturbances/impacts.
3. Failed to plant the woody plant materials prior to the 2012 growing season for the areas designated PFO and PSS.
4. Failed to propose corrective action in the 2013 Mitigation monitoring report, (MMR) to address noted deficiencies in the compensation success or the presence of invasive or noxious species. .
5. In addition, based on the DEQ inspection, there were several breeches located along the dikes constructed to manage the adequate hydrology of the cells. These breeches were not identified in the mitigation monitoring reports.

On September 8, 2014, on behalf of the Permittee, Stantec, an environmental consulting firm (Stantec), submitted to DEQ a formal NOV response to the alleged violations including a proposed Corrective Action Plan (CAP):.

On September 10, 2014, DEQ met with representatives of the Permittee and Stantec to discuss the NOV, the September 8, 2014 NOV response and proposed CAP. The CAP as proposed by Stantec at the meeting would include a combination of recordation of the preservation areas and the purchase of wetland and stream credits to compensate for the impacts.

On April 29, 2015, Stantec stated that according to their analysis and calculations, the unauthorized permanent stream channel impacts was approximately 382 linear feet of stream (excluding the 75 linear feet of restored temporary impacts) and the unauthorized permanent wetlands impacts was approximately 1.53 acres. After review, DEQ accepted the revised impact numbers and the proposed mitigation determinations. Appendix A of the Consent Order (Order) requires Round Hill to follow the terms of a CAP. The Cap requires: the submittal of preservation documents; mitigation site stabilization; purchase of stream compensation credits and wetland credits. The corrective measures required by Appendix A ensure no net loss of surface water function and value. An estimated cost for complying with the Order is \$700,000. Civil Charge: \$92,937.50.

Development of Virginia's FY 2017 Clean Water Revolving Loan Funding List: Title VI of the Clean Water Act requires the yearly submission of a Project Priority List and an Intended Use Plan in conjunction with Virginia's Clean Water Revolving Loan Fund (VCWRLF) Federal Capitalization Grant application. Section 62.1-229 of Chapter 22, Code of Virginia, authorizes the Board to establish to whom loans are made, loan amounts, and repayment terms. In order to begin the process, the Board needs to consider its FY 2017 loan requests, tentatively adopt a FY 2017 Project Priority List based on anticipated funding, and authorize the staff to receive public comments. On June 1, 2016 the staff solicited applications from the Commonwealth's localities and wastewater authorities as well as potential land conservation applicants and Brownfield remediation clientele. July 15, 2016 was established as the deadline for receiving applications. Based on this solicitation, DEQ received twenty-four (24) wastewater improvement applications requesting \$126,677,274, one (1) application for a stormwater management project (\$4,307,361), and one (1) living shorelines application for an additional \$250,000, bringing the total amount requested to \$131,234,635.

With substantial revenues coming in from our large loan portfolio, continued federal and state match funding, and moderate loan demand over the last several years, the VCWRLF continues to maintain very healthy account balances. Therefore, even with the potential for reduction in federal appropriations this year, the accumulation of monies that have and will occur in the Fund through loan payments, interest earnings, and de-allocations from leverage accounts will result in enough funding being available during the FY 2017 funding cycle to fund all of the applications received. The staff believes it is prudent to move forward with the initial targeting of Virginia's proposed FY 2017 clean water revolving loan funding list for public review based on this projected availability. Final Board approval of the list will not be requested until the December meeting.

All 24 wastewater applications were evaluated in accordance with the program's Funding Distribution Criteria. In keeping with the program objectives and funding prioritization criteria, the staff reviewed project type and impact on state waters, the locality's compliance history and fiscal stress, and the projects' readiness-to-proceed. The one stormwater application was reviewed in accordance with the Board's Priority Ranking Criteria for Stormwater projects. All applications are considered to be of good quality and should provide significant water quality and/or environmental improvements.

The recommended project funding list shown below provides funding for all the applications received. It is based on the best information and assumptions currently available to staff from the applications received, existing and projected Fund balances, federal budget projections, and discussions between DEQ and the Virginia Resources Authority. Several activities will be occurring over the next few months to help clarify these factors and provide additional input to the process including the following: (1) DEQ will hold individual meetings with targeted recipients to verify the information in the applications, (2) finalization of the federal budget for 2017 should determine the federal appropriation for the Clean Water SRF, and (3) staff will provide public notification of the proposed project list and hold a public meeting. The staff is recommending that the list be tentatively adopted, subject to the verification of information in the loan applications and public review and comment. The final list will be brought back to the Board in December.

The VCWRLF program solicited applications for FY 2017 funding assistance and evaluated the 26 requests received totaling \$131,234,635. After an evaluation of funding availability and priority considerations, Virginia's FY 2017 Project Priority List includes all 26 projects totaling \$131,234,635. Based on current and projected cash resources, the Board will have sufficient funds available to honor these requests at the amounts shown.

	Applicant	Project Type	Requested Amount
1	Town of Virgilina	Wastewater	\$310,045
2	City of Norfolk	Wastewater	\$10,000,000
3	Wise County PSA	Wastewater	\$531,127
4	Town of Wytheville	Wastewater	\$1,222,000
5	Town of Clifton Forge	Wastewater	\$1,349,739
6	City of Richmond	Wastewater	\$2,696,622
7	Hampton Roads Sanitation District	Wastewater	\$1,729,713
8	Hampton Roads Sanitation District	Wastewater	\$1,201,200
9	Town of Pennington Gap	Wastewater	\$1,652,791
10	City of Covington	Wastewater	\$498,000
11	Town of Marion	Wastewater	\$346,300
12	City of Petersburg	Wastewater	\$750,000
13	Hampton Roads Sanitation District	Wastewater	\$7,338,652
14	Hampton Roads Sanitation District	Wastewater	\$3,534,541

	Applicant	Project Type	Requested Amount
15	Hampton Roads Sanitation District	Wastewater	\$1,315,241
16	Henry County PSA	Wastewater	\$23,659,400
17	Hampton Roads Sanitation District	Wastewater	\$2,334,378
18	Hampton Roads Sanitation District	Wastewater	\$2,176,098
19	Alexandria Renew Enterprises	Wastewater	\$2,200,000
20	Town of Gate City	Wastewater	\$1,726,278
21	City of Martinsville	Wastewater	\$3,425,000
22	Hampton Roads Sanitation District	Wastewater	\$47,885,843
23	Hampton Roads Sanitation District	Wastewater	\$6,094,306
24	Harrisonburg-Rockingham RSA	Wastewater	\$2,700,000
25	City of Richmond	Stormwater	\$4,307,361
26	Middle Peninsula PDC	Living Shorelines	\$250,000
		Total =	\$131,234,635

Approval of Draft Revisions to the Stormwater Local Assistance Fund (SLAF) Guidelines: DEQ has been administering the Stormwater Local Assistance Fund (SLAF) for the last three years, authorizing approximately 150 capital projects totaling \$60 million in funding to date. The Virginia General Assembly recently amended the code to expand SLAF eligibility to include the acquisition of nonpoint source nutrient credits (SLAF eligibility was previously solely for capital projects). DEQ staff has developed draft revisions to the Board-approved SLAF Guidelines to address this new eligibility, as well as a number of other changes to improve the program, and is requesting Board approval to present these revisions for public review/comment.

In 2013, the Virginia General Assembly included Item 360 in Chapter 860 of the Acts of Assembly (the Commonwealth's 2013-2014 Budget) which created and set forth specific parameters for the administration of the Stormwater Local Assistance Fund (SLAF) and directed the Board to issue guidelines for the distribution of moneys from the SLAF. The purpose of the SLAF is to provide matching grants to local governments for the planning, design, and implementation of stormwater best management practices that address cost efficiency and commitments related to reducing water quality pollutant loads. On September 30, 2013, the Board approved the SLAF Guidelines for implementation. The Fund has received funding authorization totaling \$60 million over the last three fiscal years. As previously stated, the General Assembly recently added the purchase of non-point source nutrient credits to SLAF eligibility which necessitated revisions to the SLAF Guidelines to address that legislation. DEQ staff determined that additional changes would be beneficial to improve the SLAF program while we were going through a revision process.

During the drafting of these SLAF Guideline revisions, DEQ reached out to a number of stakeholder organizations that had provided input during the initial Guideline development process and had maintained interest in the program since its implementation, in order to receive their suggestions for program improvement. Those groups were the Virginia Municipal Stormwater Association, Chesapeake Bay Foundation, and the James River Association. Additional input was provided by the Reedy Creek Coalition. All suggestions were considered by DEQ and many resulted in changes to the Guidelines. DEQ also made a number of other revisions based on our three year experience implementing the program. Highlights of the proposed revisions included for Board consideration are as follows:

- (1) Purchase of Non-Point Source Nutrient Credits- Language has been included in the 'Eligible Projects' section of the Guidelines to add non-point source nutrient credits. The credits must be permanent and DEQ certified to be eligible. Funding for non-point source nutrient credit purchase would be limited to no more than 25% of available funds in any given funding cycle. This position was recommended by the stakeholders and supported by DEQ as a reasonable limitation for the first years of this new program element. Also it was considered important for the program to continue to support a significant number of on-the-ground capital projects that improve local water quality as well as Chesapeake Bay restoration goals. For the most part, the existing Priority Ranking Criteria developed for capital projects will be used to rank non-point source nutrient credit applications; however a new set of the Readiness- to-Proceed criteria unique to credit purchase was developed.
- (2) Grant Award Process Changes- As suggested, language was added/revised to reflect the consideration of distributing funds to the greatest number of communities as practicable during the selection process, that individual grant awards would be made per project, and that DEQ would manage the Fund to maintain some contingency funds to address unforeseen cost overruns.
- (3) Changes to the Priority Ranking Criteria- As requested, the points for the Cost- Effectiveness category were increased with points reduced from the Pollutant Removal category. In order to try to address the chronic problems

we've experienced with extremely slow progress with the implementation of SLAF-funded projects, the point value was increased for the Readiness to Proceed category and more appropriate and verifiable milestones were established. And as previously stated, Readiness to Proceed criteria were created for new purchase of nutrient credits requests.

- (4) Stream Restoration Projects- Due to concerns expressed regarding some stream restoration projects, language has been added which requires that applications for restoration projects must include a written description of the site selection process including documentation and photographs of the stream to be restored.
- (5) As a grant cost control measure, SLAF participation in the cost of professional services associated with projects will be limited to no more than 35% of the construction cost for the project.
- (6) The minimum allowable grant amount was reduced from \$100,000 to \$50,000.

The 2016 Virginia General Assembly added the purchase of non-point source nutrient credits as a new eligibility for the Stormwater Loan Assistance Fund (SLAF). In order to address this change, as well as other improvements to the program, DEQ staff has drafted revisions to the SLAF Guidelines for Board authorization for public review/comment. After completion of the public participation period, the revisions will be brought back to the Board for final approval.