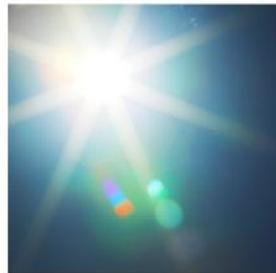




Virginia Department of Environmental Quality

Information Session Prior to Public Hearing on the Proposed Reissuance of VPDES Permit No. VA0004146 for Dominion – Chesterfield Power Station

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While this permit addresses dewatering of the ash ponds, the ultimate disposition of the ash ponds' solid contents and long-term groundwater management are the subject of DEQ solid waste program permits, and will not be addressed in this presentation.



- Applicant: Virginia Electric and Power Company, dba Dominion Virginia Power
- Permit Action: Reissuance of VA0004146, Chesterfield Power Station
- Electricity first generated at facility in 1945
- Current generation units provide 1750 MW.
- Units 1-2 were, and Units 3-6 are, coal-fired.
- Units 7 & 8 replaced Units 1 and 2 and burn natural gas and distillate oil.



Coal Combustion Residuals (CCR) disposal

- Historically, CCRs were conveyed from the boilers to treatment/disposal units by wetting down the ash and sluicing the mixture to the “Lower Ash Pond” located on site.
- This pond provided settling for the ash and also provided treatment for other waste streams generated by the facility.
- Solids dredged from the Lower Ash Pond were placed in the “Upper Ash Pond” and further dewatered.



Coal Combustion Residuals (CCR) disposal (continued)

- EPA's CCR rule mandates the closure of ash ponds; the closure of these ponds, and the conversion to a dry means of disposal of future CCRs, are the subjects of DEQ solid waste program permit actions and are not addressed in this permit.
- Please note that irrespective of the means of disposal of the CCRs in the ash ponds, the process of dewatering the CCRs, as regulated under this draft permit, will still be necessary.



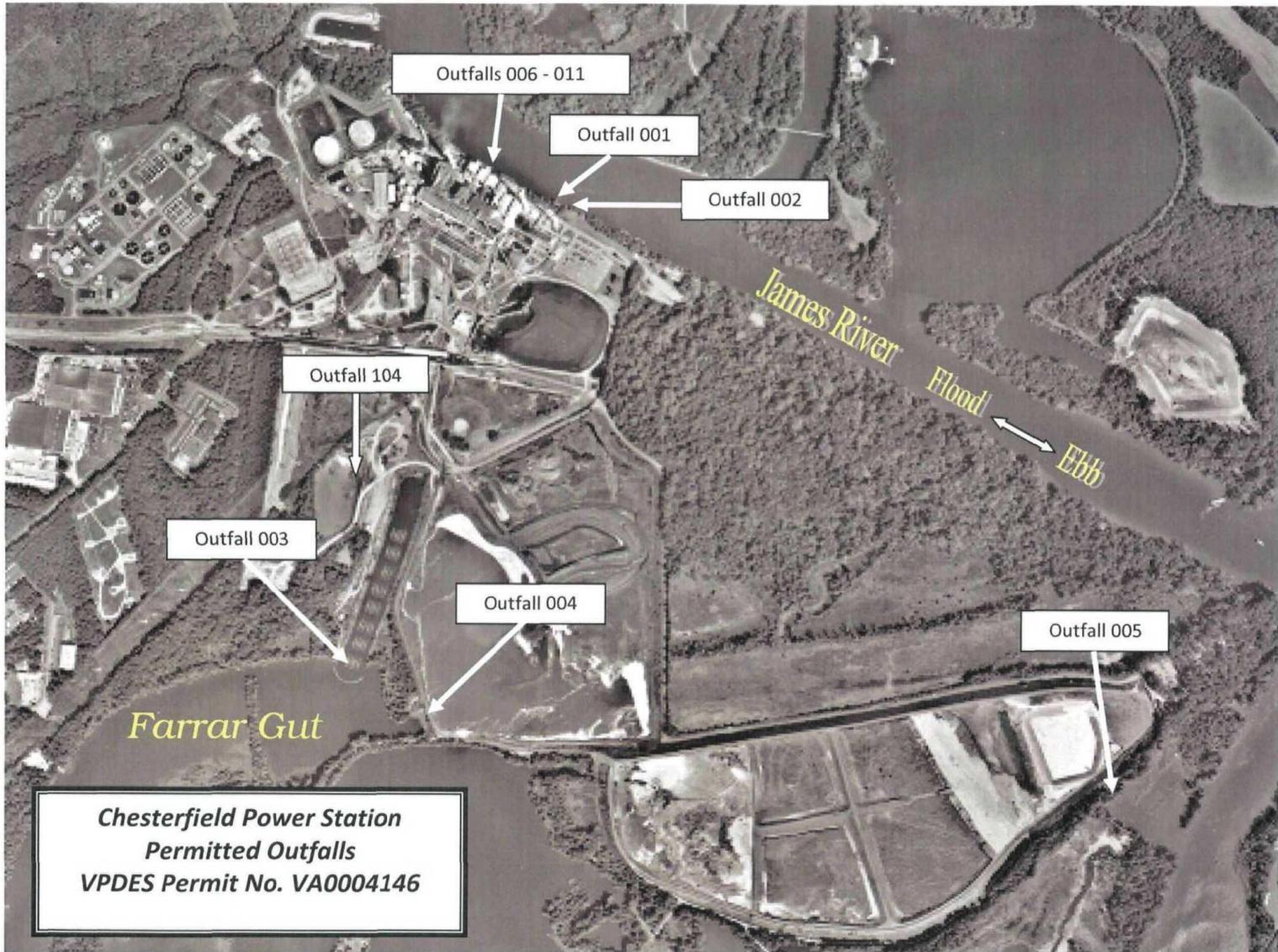
The Draft Permit Addresses:

- Effluent monitoring and limits
 - Cooling water discharges
 - Ash pond operation, decanting and dewatering
 - Other waste streams on site (low volume wastes)
- Other requirements address:
 - Cooling Water Intake Structure
 - Ash Pond Closure Stormwater Management
 - Continuation of existing Groundwater Monitoring



The Draft Permit Does Not Address:

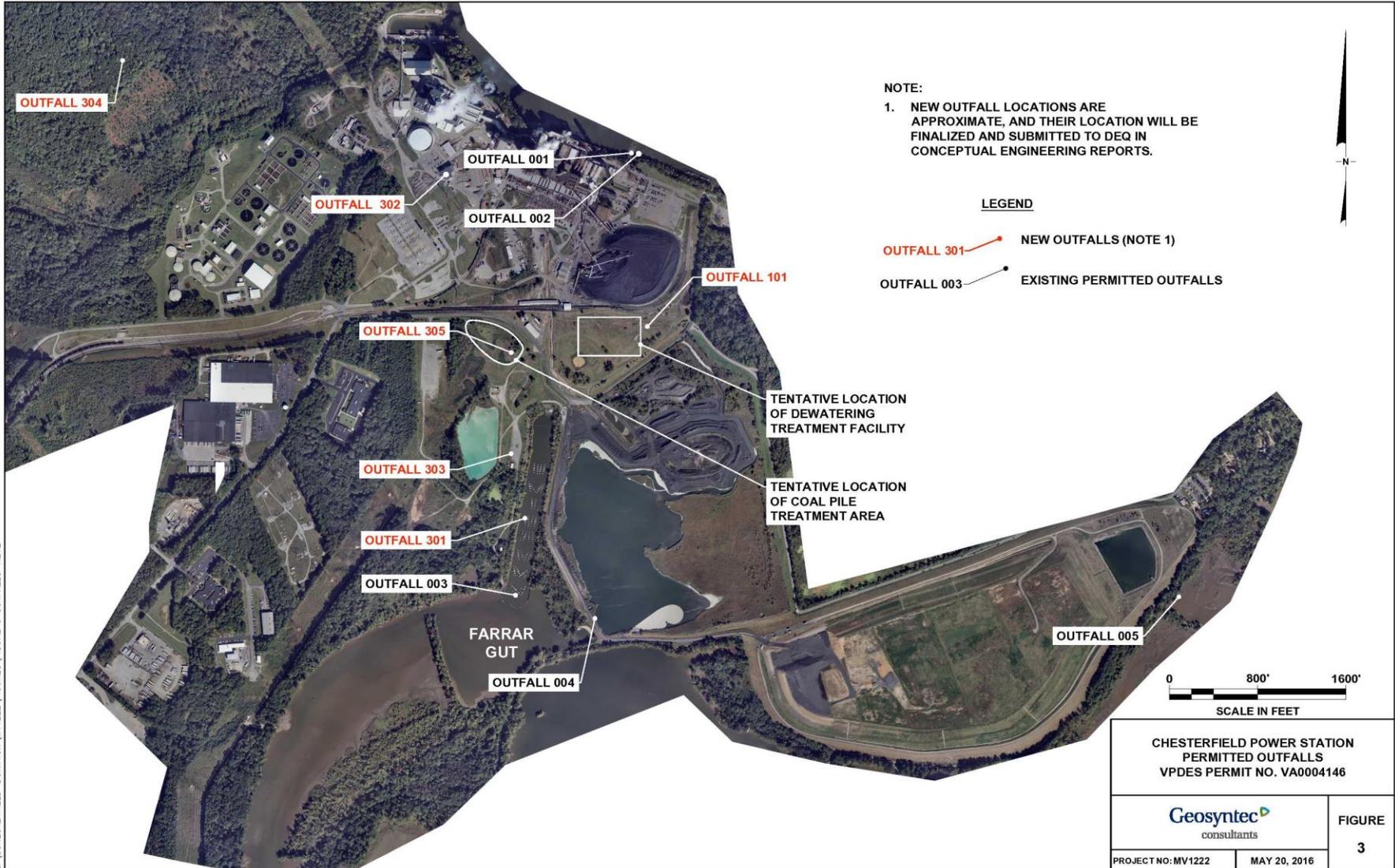
- Conversion of the Coal Ash Ponds to solid waste storage facilities
- Changes to the existing groundwater monitoring, corrective action and/or risk assessment plans.
- Stormwater management not related to closure of the Coal Ash ponds (site-wide stormwater addressed in Industrial Stormwater General Permit VAR051023)





Uses of water: continuing

Source of Wastewater	Max. Flow (MGD)	Outfall Designations in VPDES permits		
		2004 reissuance	2016 reissuance (interim)	2016 reissuance (final)
Cooling water from Units 7 & 8	212	001	001	001
Cooling water from Unit 3	89	002	002	002
Cooling water from Units 4, 5 & 6	753	003	003	003



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Uses of water: discontinuing

Source of Wastewater	Max. Flow (MGD)	Outfall Designations in VPDES permits		
		2004 reissuance	2016 reissuance (interim)	2016 reissuance (final)
Stormwater landing on Lower Ash Pond	Combined discharge to not exceed 5 MGD when new treatment facility is built	004	004, then 001 or 002 via 101	N/A
Ash sluice water		004	004	N/A
Stormwater landing on Upper Ash Pond		005	004, then 001 or 002 via 101	N/A
Screen backwash from water intakes	7.235	006-011	N/A	N/A



Pond Drawdown and Dewatering

- Prior to drawdown, activities currently conducted in the Lower Ash Pond are subject to newer, more protective water quality-based limits.
- Drawdown is the treatment and discharge of standing water in the pond; dewatering is the treatment and discharge of the water trapped in the pores between the particles of the solids in the ponds.



Effluent Limit Development for Pond Closure

- During drawdown, both the Lower and Upper Ash Ponds are subject to water quality-based limits comparable to those imposed at the Bremo and Possum Point facilities;
 - Parameters known to be present in CCRs were evaluated;
 - Minimal (2:1) dilution of the effluent in the James River was assumed, and
 - Concentrations equal to the most protective water quality standard for the respective parameters were assumed present
- The permittee will be required to sample for most of these parameters three times weekly and to expedite laboratory analysis of the samples.



Special Conditions Pertaining to Drawdown/Dewatering Activities

- Ash Pond Drawdown and Dewatering Discharge: Clarifies when effluent limitations at Outfall 101 become effective during drawdown and dewatering procedures, and defines reporting requirements.
- Special Condition Establishing Treatment Requirements for Discharges Associated with Drawdown and Dewatering of the Lower and Upper Ash Ponds: This special condition also establishes monitoring and reporting requirements to ensure compliance with the condition is maintained. Additional treatment is required once certain “trigger thresholds” (below the permit limits) are reached.



Special Conditions Pertaining to Drawdown/Dewatering Activities

- Cease Discharge Requirements for Outfall 101: Any discharge from Outfall 101 during drawdown and dewatering activities that exceeds established effluent limitations is ceased as soon as possible once the exceedance(s) is discovered, and establishes conditions that must be met before the discharge resumes.
- Pond Closure Drawdown Rate: The drawdown limit of 2 feet per day was developed per the Department of Conservation and Recreation Dam Safety Division's recommendation, to minimize the risk of dam stability issues during drawdown.



Uses of water (new or changed)

Source of Wastewater	Max. Flow (MGD)	Outfall Designations in VPDES permits		
		2004 reissuance	2016 reissuance (interim)	2016 reissuance (final)
Toe drain water from Lower Ash Pond	Combined discharge to not exceed 6 MGD when new low-volume treatment facility is built	N/A	N/A	301
Low volume wastes		004	004	
Non-chemical cleaning wastes				
Station car wash		005	005	
Water Treatment Plant wastewater				
Toe drain water from Upper Ash Pond		N/A	004	
Screen backwash from Proctor's Creek WWTP effluent		N/A	004	
Unit 6 Flue Gas Desulfurization (FGD) runoff	N/A	004		
FGD wastewater	0.11	N/A	402	301 via 302
Metals Cleaning wastewater	2.7	104	401	301 via 303
Leachate and stormwater from landfill	0.19	N/A	N/A	301 via 304
Coal pile runoff	2.4	004	004	301 via 305



Effluent Limit Development for New Facilities

- Low-Volume waste treatment currently performed by Lower Ash Pond will be performed by a new Low Volume Wastewater Treatment System(LVWWTS).
- Several of the waste streams to be discharged to the LVWWTS are subject to new federal effluent guidelines and will receive additional treatment prior to discharge to the LVWWTS.



Effluent Limit Development for New Facilities

- The LVWWTs is subject to water quality-based limits developed in a manner comparable to those discussed in the Lower Ash Pond closure;
 - Parameters known to be present in these waste streams were evaluated;
 - Water quality criteria must be met at the point of discharge to Farrar Gut without instream mixing, and
 - Concentrations equal to the most protective water quality standard for the respective parameters were assumed present



Major Permit Changes (future activities)

- Notification of Commencement of Discharge from the LVWWTs: Clarifies monitoring and reporting requirements before commencement of discharge from the LVWWTs. This first day of discharge will be used as the trigger date for other permit conditions.
- Water Quality Criteria Monitoring (Effluent Characterization) for Outfall 301: Worst case concentrations were developed to conduct the reasonable potential analyses for this outfall, but updated data is needed to confirm characterization of the effluent. The data will be submitted no later than 90 days following the commencement of discharge from Outfall 301.



- Process Water Conveyance Investigation: Given the size, complexity and age of the infrastructure at this permitted facility, a comprehensive investigation of the site is warranted to identify potential risks and prevent illicit and unauthorized discharges to state waters.
- 316(b) Requirements
 - 2014 EPA rulemaking established additional VPDES requirements for “cooling water intake structures”
 - Established national standard of “best technology available” (BTA)
 - Proposed permit includes requirements to gather information for the next permit cycle



What happens next?

- July 21, 2016
 - Public comment period ends at 11:59 P.M.
- September 22-23, 2016
 - State Water Control Board meeting
(General Assembly Building)



Citizen participation

- Comments on this proposed permit action may be mailed or e-mailed to DEQ during the comment period, and comments may be provided orally, in writing, or both at this evening's hearing.
- Comments should address the adequacy of the draft VPDES permit; if an objection to the permit is raised, please provide a technical or legal explanation for the objection.



Virginia Department of Environmental Quality

***This concludes the staff presentation
and the hearing will begin shortly.***

