COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
PIEDMONT REGIONAL OFFICE
4949A Cox Road, Glen Allen, Virginia 23060
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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Jeffery Steers
Regional Director

May 17, 2017

Paula A. Hamel
Director, Generation Environmental Services
Dominion Virginia Power
Chesterfield Power Station

Transmitted electronically: paula.a.hamel@dom.com

Re: VA0004146 – Chesterfield Power Station – Process Wastewater Conveyance Investigation Plan

Ms. Hamel:

Thank you for submitting the Process Water Conveyance Investigation Plan in accordance with Part I.C.28 of VPDES Permit VA0004146 which became effective on October 1, 2016. The Department of Environmental Quality has reviewed and hereby approves the plan. The approved plan is now incorporated by reference as an enforceable part of the permit.

This approval is your authorization to begin the project. As noted in Part I.C.28 of the VPDES Permit, the permittee shall notify the DEQ no later than 24 hours following discovery of any potential or actual illicit or unauthorized discharge and submit a written plan and schedule to the DEQ Piedmont Regional Office for necessary repair, replacement or corrective action activities no later than 30 days following discovery.

Please contact Joseph Bryan at (804) 527-5012 or via email at Joseph.Bryan@deq.virginia.gov if you have any questions.

Sincerely,

Emilee C. Adamson

Emilee C. Adamson
Planning and Water Permit Manager

Enclosure: Approval Memorandum

cc: Kenneth Roller – Dominion
Kyle I. Winter – DEQ
Heather Deihls – DEQ

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Piedmont Regional Office

4949-A Cox Road **Glen Allen, VA 23060** **804/527-5020**

SUBJECT: Process Wastewater Conveyance Investigation Plan
VPDES Permit No. VA0004146 - Dominion Chesterfield Power Station

TO: Emilee Adamson, Planning and Water Permit Manager

FROM: Joseph Bryan, VPDES Permit Writer

DATE: April 14, 2017

COPIES: Paula A. Hamel - Dominion
Kenneth Roller - Dominion

Project Name: Process Wastewater Conveyance Investigation Plan

Project Owner: Virginia Electric and Power Company d/b/a Dominion Virginia Power

Background: The current VPDES permit for Dominion's Chesterfield Power station became effective on October 1, 2016. Condition I.C.28 of the permit requires that the facility submit a facility-wide process wastewater conveyance investigation plan no later than 180 days following the effective date of the permit. The aim of the investigation is to identify potential and actual cross connections, unknown infrastructure, bypasses, and inflow or exfiltration that could result in an illicit or unauthorized discharge from any process wastewater conveyances at the station.

Project Scope: The permittee has submitted a plan in accordance with Part I.C.28 of VPDES Permit that includes a comprehensive list of the process wastewater conveyance systems at the facility and their approximate length, diameter, and piping material. According to the plan, Dominion will conduct an investigation of all wastewater conveyances using a combination of visual, video camera, dye testing, and pressure testing inspection methods. We understand that visual monitoring will be reserved for above grade conveyances. Proposed inspection methods for each identified conveyance are summarized in the plan along with a risk-based prioritized schedule.

All piping inspections are expected to be completed within 21 months from approval of the plan by DEQ and a final written report summarizing the findings of the investigation will be submitted to DEQ no later than two years from approval.

If any potential or actual illicit or unauthorized discharges are identified in the course of the investigation, notification will be made to DEQ no later than 24 hours from discovery. A written plan and schedule for any necessary repair, replacement, or corrective action activities will be submitted to DEQ no later than 30 days following discovery.

Staff Comments: Staff has no objections to the Process Wastewater Conveyance Investigation Plan and recommends that the plan be approved.

Approved: Emilee C. Adamson

Emilee C. Adamson
Planning and Water Permit Manager

Date: May 17, 2017

Dominion Resources Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060

dom.com

BY US MAIL
RETURN RECIEPT REQUESTED

March 27, 2017

Mr. Joseph Bryan
DEQ – Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060

Re: Dominion – Chesterfield Power Station – VPDES Permit VA0004146
Process Wastewater Conveyance Investigation Plan Submittal

Dear Mr. Bryan:

The individual VPDES permit for Dominion – Chesterfield Power Station (VA0004146) became effective on October 1, 2016. In accordance with condition I.C.28 of the permit, Dominion is submitting the attached Process Wastewater Conveyance Investigation Plan for your review and approval. The Plan includes details related to identified process wastewater conveyances, proposed investigation methods, and an investigation schedule.

Should you have any questions and/or comments regarding this information please contact Amelia Boschen, of Dominion Generation Environmental Services, at (804) 273-3485 or amelia.h.boschen@dom.com.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

Paula A. Hamel
Director, Generation Environmental Services

Mr. Joseph Bryan
March 27, 2017

Dominion – Chesterfield Power Station (VA0004146)
Process Wastewater Conveyance Investigation Plan

The current VPDES permit for Dominion's Chesterfield Power station became effective on October 1, 2016. Condition I.C.28 of the permit includes a requirement that the facility submit a facility-wide process wastewater conveyance investigation plan no later than 180 days following the effective date of the permit. The aim of the investigation is to identify potential and actual cross connections, unknown infrastructure, bypasses, and inflow or exfiltration that could result in an illicit or unauthorized discharge from any process wastewater conveyances at the station.

Identification of Process Wastewater Conveyances:
Since issuance of the permit, the station has compiled a comprehensive list of process wastewater conveyance systems at the facility. This list was developed using engineering records and knowledge of station personnel. The attached spreadsheet provides additional detail on the identified piping including approximate length, diameter, and piping material.

Investigation Plan:
Dominion will conduct an investigation of all wastewater conveyances using a combination of visual, video camera, dye testing, and pressure testing inspection methods. Proposed inspection methods for each identified conveyance are summarized on the attached spreadsheet. In accordance with the station's O&M manual, written notice (fax, letter, or email) will be provided to DEQ prior to dye testing events.

Schedule
Each identified process wastewater conveyance was evaluated for risk based on multiple factors such as construction material, age, contents, and location. Conveyances were assigned an overall risk score and prioritized accordingly. The attached spreadsheet includes the proposed schedule for completion of inspections for each conveyance. Piping in group "1" will be inspected first, followed by group "2" and progressing through group "6". All piping inspections will be completed within 1-21 months from approval of this plan. The inspection schedule may be adjusted over the investigation period if required by weather conditions, staffing resources, or other unforeseen circumstances.

A final written report summarizing the findings of the investigation will be submitted to DEQ no later than two years from approval of this plan.

If any potential or actual illicit or unauthorized discharges are identified in the course of this investigation, notification will be make to DEQ no later than 24 hours from discovery. A written plan and schedule for any necessary repair, replacement, or corrective action activities will be submitted to DEQ no later than 30 days following discovery.

Description of pipe	Approximate Length of pipe (feet)	Approximate Diameter of pipe (inches)	Pipe material	Inspection Method (Video Camera, Dye Testing, Visual Inspection or Pressure Test)	Inspection Schedule					
					All Inspections to be completed within 1-21 months of Plan Approval					
Original Water Treatment Plant Drain	250	14	Cast Iron	Video Camera	1					
Inactive pipe located south of Unit 7 and 8 intake	100	6	RCP	Video Camera	1					
Ash Transport Water U5 nearFD Fans	100	15	Carbon Steel	Visual Inspection	1					
3,4,5 FGD Sump to Waste Water Treatment or U6 Sump	300	24	HDPE	Dye Testing	1					
Waste Water Treatment to FGD Sump Line	200	18	Carbon Steel	Dye Testing	1					
Ash Transport Water from U6 FGD to Master Sump	600	12	Carbon Steel	Visual Inspection	1					
Yard Sump 2 intake main	750	24	RCP	Dye Testing		2				
Yard Sump 2 to Yard Sump 1	350	16	RCP	Dye Testing		2				
Yard Sump 3 intake main	375	8	Terracota	Dye Testing		2				
Yard Sump 3 to Yard Sump 1	700	8	RCP	Dye Testing		2				
Yard Sump 1 intake main	600	36	RCP	Dye Testing		2				
Yard Sump 1 to Master Sump	3850	30	HDPE, Fiberglass	Dye Testing		2				
Cooling Tower Process Drain	180	6	CISP	Dye Testing		2				
Air Compressor Process Drain	100	6	CISP	Dye Testing		2				

Description of pipe	Approximate Length of pipe (feet)	Approximate Diameter of pipe (inches)	Pipe material	Inspection Method (Video Camera, Dye Testing, Visual Inspection or Pressure Test)	Inspection Schedule: All Inspections to be completed within 1-21 months of Plan Approval					
Water Treatment Building Process Drain	100	6	Carbon Steel	Dye Testing		2				
Process/Blowdown Water to Metals Ponds Treatment Facility	1500	16	Carbon Steel	Video Camera			3			
Metals Water Treatment Area to Pond	200	10	Carbon Steel	Video Camera			3			
Metals Pond to Ash Pond	775	16	Carbon Steel	Video Camera			3			
S-Ditch Surface Water to Ash pond	700	16	Carbon Steel	Visual Inspection			3			
Outfall 001	1000	84	RCP	Dye Testing				4		
Outfall 002	1000	72	RCP	Dye Testing				4		
Outfall 003	2500	66	RCP	Dye Testing				4		
Unit 6 Circulating Water Line	300	120	RCP	Dye Testing					5	
Unit 5 Circulating Water Line	300	90	RCP	Dye Testing					5	
Unit 4 Circulating Water Line	300	66	RCP	Dye Testing					5	
Unit 3 Circulating Water Line	300	66	RCP	Dye Testing					5	
Unit 8 Circulating Water Line	300	60	RCP	Dye Testing					5	
Unit 7 Circulating Water Line	300	48	RCP	Dye Testing					5	

Description of pipe	Approximate Length of pipe (feet)	Approximate Diameter of pipe (inches)	Pipe material	Inspection Method (Video Camera, Dye Testing, Visual Inspection or Pressure Test)	Inspection Schedule: All Inspections to be completed within 1-21 months of Plan Approval					
U1 & U2 Bottom Ash to Ash Pond	2200	10	Carbon Steel	Visual Inspection						6
U3 & U4 Bottom Ash & Pyrites to Ash Pond	2200	10	Carbon Steel	Visual Inspection						6
U3 Flyash to Ash Pond	2200	15	Carbon Steel	Visual Inspection						6
U6 West Flyash to Ash Pond	2200	15	Carbon Steel	Visual Inspection						6
U6 Normal Sump to Ash Pond	2200	24	Carbon Steel	Visual Inspection						6
U4 Flyash to Ash Pond	2200	15	Carbon Steel	Visual Inspection						6
U6 Emergency Sump to Ash Pond	2200	15	Carbon Steel	Visual Inspection						6
U5 Bottom Ash to Ash Pond	2200	15	Carbon Steel	Visual Inspection						6
U6 East Flyash & Pyrites to Ash Pond	2200	15	Carbon Steel	Visual Inspection						6
U5 Flyash & Pyrites to Ash Pond	2200	15	Carbon Steel	Visual Inspection						6
U6 Bottom Ash to Ash Pond	2200	15	Carbon Steel	Visual Inspection						6