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Part B Permit Application

Virginia Electric and Power Company
Chesterfield Power Station
Upper (East) Pond
Chesterfield County, Virginia

GAI Project Number: C150035.00

January 2016



Prepared by: GAI Consultants, Inc.
Richmond Office
4198 Cox Road, Suite 114
Glen Allen, Virginia 23060

Prepared for: Virginia Electric and Power Company
5000 Dominion Boulevard
Glen Allen, Virginia 23060

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Table of Contents

Cover Letter

Notice of Intent

DEQ Form SW PTB (Part B Application Form)

CCR Closure Plan

Post-Closure Care Plan

COVER LETTER



January 7, 2016

Mr. Justin Williams
Director, Office of Waste Permitting and Compliance
Virginia Department of Environmental Quality
629 East Main Street
Richmond, Virginia 23219

Subj: Solid Waste Permit Application for Closure of the Upper (East) Pond
Chesterfield Power Station, Chesterfield County, Virginia

Dear Mr. Williams:

Dominion is submitting the attached Part B solid waste permit application package for the closure of the Upper (East) Pond at the Chesterfield Power Station located in Chesterfield County, Virginia. The attached application includes the following information:

- Solid Waste Disposal Facility Part B Application Form (DEQ Form SW PTB)
- Notice of Intent for Closure
- CCR Closure Plan
- Post-Closure Care Plan

As previously discussed, the Groundwater Monitoring Plan will be submitted under separate cover.

If you have any questions, please contact Dennis Slade at (804) 273-2658 or Kim Lanterman at (804) 273-4123.

Sincerely,

Cathy C. Taylor
Director
Electric Environmental Services

Attachments

NOTICE OF INTENT



January 8, 2016
Project C150035.00

Mr. Justin Williams
Director, Office of Waste Permitting and Compliance
Virginia Department of Environmental Quality
629 East Main Street
Richmond, Virginia 23219

**Chesterfield Power Station
Notice of Intent – Closure of Upper (East) Pond
Part B Permit Application
Chesterfield County Virginia**

Dear Mr. Williams:

In accordance with 9 Virginia Administrative Code (VAC) 20-81-450 of the Virginia Solid Waste Management Regulations, Virginia Electric and Power Company d/b/a Dominion Virginia Power (Dominion) is hereby providing a Notice of Intent (NOI) to close the Upper (East) Pond Coal Combustion Residuals (CCR) surface impoundment at the Chesterfield Power Station (Station) per the requirements in the United States Environmental Protection Agency's (EPA's) "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments" (CCR Rule), which was published in the Federal Register on April 17, 2015 (with an effective date of October 19, 2015) (40 CFR 257). Through this application, the closure process will transition to the Solid Waste Management Program. To date, discharge from the Upper (East) Pond has been regulated under the facility's VPDES permit (No. VA 004146), and closure has been initiated in accordance with that permit, which includes a Closure Plan approved by the Virginia Department of Environmental Quality (VDEQ) in 2003.

This Part B Permit application incorporates the applicable portions of 9 VAC 20-81 et seq. and the CCR Rule. The Upper (East) Pond Closure Plan includes the installation of an engineered cover system in accordance with the CCR Rule.

Two drawings are attached to this Notice of Intent (NOI) Letter:

- Figure 1, Site Location Map, and
- Figure 2, Upper (East) Pond Facility Boundary and Waste Management Unit Boundary

The enclosed Part B Permit Application and this NOI are provided to the VDEQ for review. The following documents are included with this application:

- ▶ Part B Permit Application;
- ▶ CCR Closure Plan, including:
 - Certification that the engineered cover system has been designed in accordance with the CCR Rule;
 - Closure Design Plans;
 - Construction Quality Assurance Plan and Technical Specifications;
 - Engineering Calculations; and
 - Closure Cost Estimate

Mr. Justin Williams
January 8, 2016
Project C150035.00

► Post-Closure Care Plan, including Post-Closure Cost Estimate

A Groundwater Monitoring Plan for the closure of the Upper (East) Pond will be submitted to the VDEQ via a separate transmittal.

Please confirm receipt of this NOI. Please contact Mr. Dennis Slade with Dominion at 804-273-2658 or dennis.a.slade@dom.com if you need additional information or have any questions or comments concerning this NOI and permit application submittal.

Sincerely,

GAI Consultants, Inc.

A handwritten signature in black ink, appearing to read "Donald J. Spaeder". The signature is fluid and cursive, written over a white background.

Donald J. Spaeder, P.E.
Assistant Vice President

DJS/clr

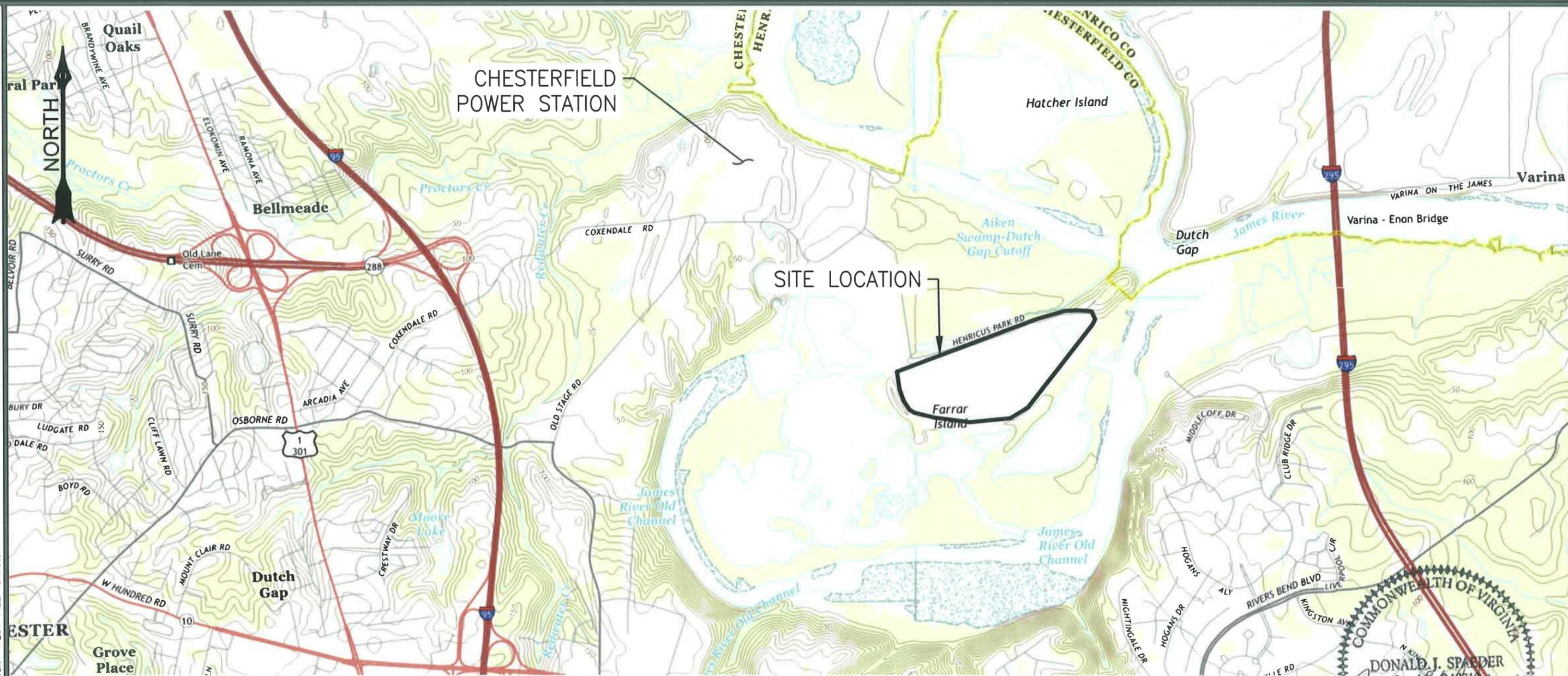
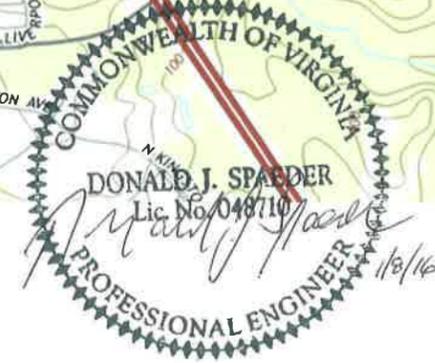
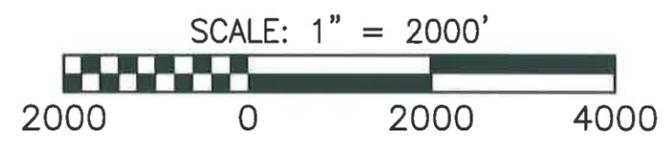


FIGURE 1
1" = 2000'



MAP REFERENCE:
USGS 7.5 MINUTE TOPOGRAPHIC
QUADRANGLES: DREWYS BLUFF,
VIRGINIA 2013,
DUTCH GAP, VIRGINIA 2013,
CHESTER, VIRGINIA 2013,
HOPEWELL, VIRGINIA 2013.

PLOTTED ON: 1/7/2016 1:44:02 PM PLOTTED BY: Joe Neiman PLOT FILE: GAI.stb

NO.:	DATE:	DWN:	CHK:	APV:	DESCRIPTION:
A	1/7/2016	JCN	TIM	JDP	RELEASED FOR APPROVAL
REVISION RECORD					

DRAWING TITLE SITE LOCATION MAP		
PROJECT UPPER (EAST) POND CCR CLOSURE CHESTERFIELD POWER STATION CHESTERFIELD COUNTY, VIRGINIA	 gai consultants	CLIENT DOMINION GLEN ALLEN, VIRGINIA

DRAWN BY: NEIMAJC	CHECKED BY: MURAOTI	APPROVED BY: PHILLJD
REVISION A	SCALE: AS SHOWN	ISSUE DATE: 1/7/2016
SHEET NO.: 1 OF 1		
GAI FILE NUMBER: C150035-00-00-00-C-B2-001		
GAI DRAWING NUMBER: B2-001		

This drawing was produced with computer aided drafting technology and is supported by electronic drawing files. Do not revise this drawing via manual drafting methods.

ISSUING OFFICE: Pittsburgh | 385 E. Waterfront Drive, Homestead, PA 15120
GAI CAD FILE PATH: Z:\Energy\2015\C150035.00 - DOM-Chesterfld Pond Closu\CAD\Production Drawings\C150035-00-00-00-C-B2-001.dwg

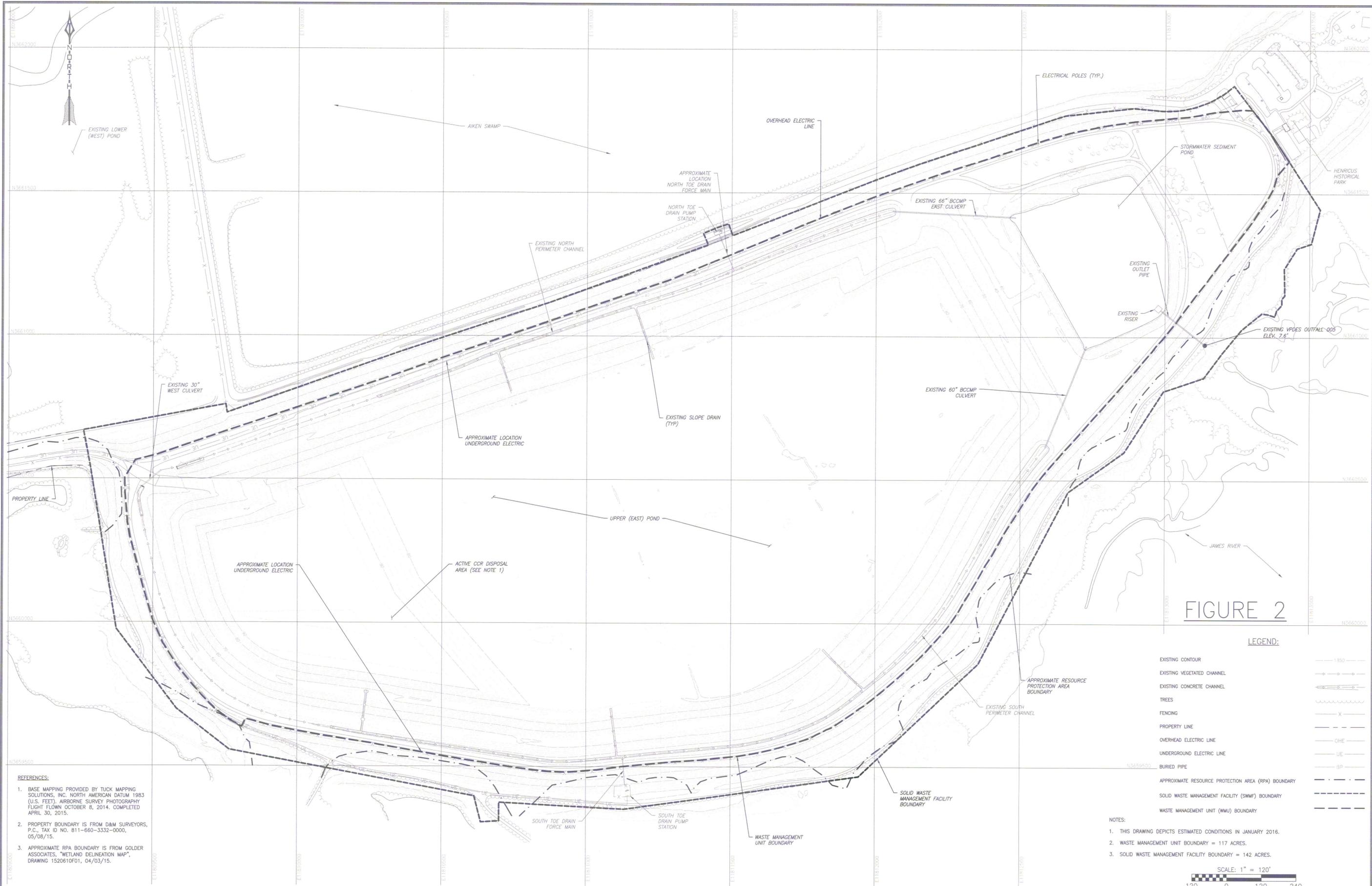


FIGURE 2

LEGEND:

- EXISTING CONTOUR 1 850
- EXISTING VEGETATED CHANNEL
- EXISTING CONCRETE CHANNEL
- TREES
- FENCING
- PROPERTY LINE
- OVERHEAD ELECTRIC LINE OHE
- UNDERGROUND ELECTRIC LINE UE
- BURIED PIPE BP
- APPROXIMATE RESOURCE PROTECTION AREA (RPA) BOUNDARY
- SOLID WASTE MANAGEMENT FACILITY (SWMF) BOUNDARY
- WASTE MANAGEMENT UNIT (WU) BOUNDARY

- NOTES:**
- THIS DRAWING DEPICTS ESTIMATED CONDITIONS IN JANUARY 2016.
 - WASTE MANAGEMENT UNIT BOUNDARY = 117 ACRES.
 - SOLID WASTE MANAGEMENT FACILITY BOUNDARY = 142 ACRES.

SCALE: 1" = 120'

- REFERENCES:**
- BASE MAPPING PROVIDED BY TUCK MAPPING SOLUTIONS, INC. NORTH AMERICAN DATUM 1983 (U.S. FEET). AIRBORNE SURVEY PHOTOGRAPHY FLIGHT FLOWN OCTOBER 8, 2014. COMPLETED APRIL 30, 2015.
 - PROPERTY BOUNDARY IS FROM D&M SURVEYORS, P.C., TAX ID NO. 811-660-3332-0000, 05/08/15.
 - APPROXIMATE RPA BOUNDARY IS FROM GOLDER ASSOCIATES, "WETLAND DELINEATION MAP", DRAWING 1520610F01, 04/03/15.

REVISION RECORD					
NO.	DATE	DWN	CHK	APV	DESCRIPTION
A	1/7/2016	WJH	TJM	JDP	RELEASED FOR APPROVAL

This drawing was produced with computer aided drafting technology and is supported by electronic drawing files. Do not revise this drawing via manual drafting methods.
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DRAWING TITLE		
UPPER (EAST) POND FACILITY BOUNDARY AND WASTE MANAGEMENT UNIT BOUNDARY		
PROJECT	CLIENT	
UPPER (EAST) POND CCR CLOSURE	DOMINION	
CHESTERFIELD POWER STATION	GLEN ALLEN, VIRGINIA	
CHESTERFIELD COUNTY, VIRGINIA	GAI CONSULTANTS	
ISSUING OFFICE: Murrysville 4200 Triangle Lane, Export, PA 15632-1358		

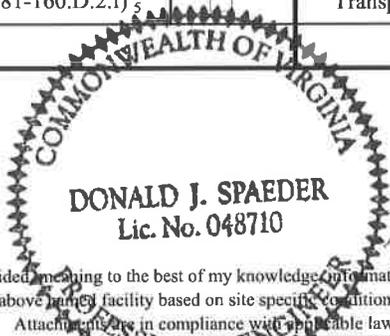


DRAWN BY: CHECKED BY: APPROVED BY: GAI FILE NUMBER:			
HARRIWJ	MURAOTI	PHILLID	C150035-00-000-00-C-E1-053
DWG TYPE: SCALE: ISSUE DATE: ALT. CLIENT DRAWING NUMBER:		SHEET NO.: GAI DRAWING NUMBER:	
AS SHOWN 1/7/2016		1 OF 1 E1-053	

**DEQ FORM SW PTB
(Part B Application Form)**

Solid Waste Disposal Facility Part B Application, DEQ Form SW PTB

	Solid Waste Permit No.		SWP		
	New Facility	<input checked="" type="checkbox"/>	Modification of existing Part B permit	<input type="checkbox"/>	
Facility Name:	Dominion Chesterfield Power Station Upper (East) Pond		Type of Landfill:	Surface Impoundment	
Facility Location:	451 Coxendale Rd, Chester, VA 23836 (37d 22m 15.2sec N, 77d 22m 8.3sec W)				
Contact Person:	Ms. Cathy C. Taylor, Director, Electric Environmental Services				
Contact Number:	804-273-2929	Contact E-mail:	cathy.c.taylor@dom.com		
Owner Name, Address, and Phone:			Operator Name, Address, and Phone:		
Mr. David A. Craymer Vice President, Power Generation System Operations Virginia Electric and Power Company 5000 Dominion Boulevard Glen Allen, Virginia 23060			Mr. David A. Craymer Vice President, Power Generation System Operations Virginia Electric and Power Company 5000 Dominion Boulevard Glen Allen, Virginia 23060		
Total Property Acreage:		Facility Boundary Acreage:	142 acres		
Disposal Unit Boundary Acreage:	117 acres	Total Capacity (cubic yards):	14.3 million		
Daily Disposal Limit:	N/A	Estimated Site Life (years):	8 years remaining (until 2023)		
Hours of Operation:	N/A				
Types of Wastes to be Accepted (check all that apply)					
Agricultural Waste	<input type="checkbox"/>	Contaminated Soil ₁	<input type="checkbox"/>	Municipal Solid Waste	<input type="checkbox"/>
Animal Carcasses	<input type="checkbox"/>	Debris Waste	<input type="checkbox"/>	Scrap Metal	<input type="checkbox"/>
Asbestos, friable	<input type="checkbox"/>	Demolition Waste	<input type="checkbox"/>	Sludge, industrial	<input checked="" type="checkbox"/>
Asbestos, non-friable	<input type="checkbox"/>	Fossil Fuel Combustion Products	<input checked="" type="checkbox"/>	Sludge, POTW	<input type="checkbox"/>
Ash, non CCB/FFCP	<input type="checkbox"/>	Household Waste	<input type="checkbox"/>	Vegetative Waste	<input type="checkbox"/>
Commercial Waste	<input type="checkbox"/>	Industrial Waste	<input checked="" type="checkbox"/>	Waste Tires	<input type="checkbox"/>
Construction Waste	<input type="checkbox"/>	Institutional Waste	<input type="checkbox"/>	White Goods	<input type="checkbox"/>
Other Special Wastes ₁	<input type="checkbox"/>	Please list:			
Does this facility use or propose to use alternate cover materials? (Yes or No)					No
If yes list material(s):					
Solid Waste Management Activities (check all that apply)					
Convenience Center	<input type="checkbox"/>	Material Salvage	<input type="checkbox"/>	Opening Burning	<input type="checkbox"/>
Household Hazardous Waste Collection	<input type="checkbox"/>	Tire Processing (Chipping, Shredding, etc.)	<input type="checkbox"/>	Landfill Mining	<input type="checkbox"/>
Mulching	<input type="checkbox"/>	Other	<input type="checkbox"/>	Please List:	

Liner Design (check all that apply)			
Sanitary Landfill		CDD or Industrial Landfills	
Subtitle D Liner (9VAC20-81-130.J.1.a)	<input type="checkbox"/>	Compacted Clay (9VAC20-81-130.J.2.a)	<input type="checkbox"/>
Pre-approved Alternate (9VAC20-81-130.J.1.b)	<input type="checkbox"/>	Synthetic Liner (9VAC20-81-130.J.2.b)	<input type="checkbox"/>
Additional Alternate (9VAC20-81-130.J.1.c) ₂	<input type="checkbox"/>	Alternate Liner (9VAC20-81-130.J.2.c) ₂	<input type="checkbox"/>
		In-Place Soil (9VAC20-81-130.J.2.d) ₃	<input type="checkbox"/>
		Double Liner (9VAC20-81-130.J.2.c) ₄	<input type="checkbox"/>
Final Cover Design (check all that apply)		Leachate Management (check all that apply)	
Standard Final Cover (9VAC20-81-160.D.2.c)	<input checked="" type="checkbox"/>	Leachate Recirculation ₆	<input type="checkbox"/>
Pre-approved Alternate (9VAC20-81-160.D.2.d)	<input type="checkbox"/>	Discharged directly to WWTP	<input type="checkbox"/>
Pre-approved Alternate (9VAC20-81-160.D.2.e)	<input type="checkbox"/>	Treated onsite and discharged ₇	<input type="checkbox"/>
Additional Alternate (9VAC20-81-160.D.2.f) ₅	<input type="checkbox"/>	Transported by a vehicle to an offsite WWTP	<input type="checkbox"/>
		Other method ₈	<input type="checkbox"/>
 <p>Stamp Professional Engineer in space provided, meaning to the best of my knowledge, information and belief, the selected landfill liner and final cover designs are, in my professional opinion, suitable for the above landfill facility based on site specific conditions and engineering principles. The designs proposed in the following Attachment are in compliance with applicable laws, codes, and ordinances.</p>			
Does this application include a Research, Development and Demonstration Plan? (Yes or No)₉			No
If yes:	The addition of liquids in addition to leachate and gas condensate from the same landfill for accelerated decomposition of the waste mass.		<input type="checkbox"/>
	Allowing run-on water to flow into the landfill waste mass.		<input type="checkbox"/>
	Allowing testing of the construction and infiltration performance or alternative final cover systems.		<input type="checkbox"/>
	Other measures to be taken to enhance stabilization of the waste mass.		<input type="checkbox"/>
Does this application include a variance request(s) to regulatory requirements? (Yes or No)			No
If yes list regulatory citation(s):			
Footnotes:			
1 - These waste types require additional information, which should be included in Attachment XIII to receive approval.			
2 - Alternate liner demonstration must be included in Attachment XIV.			
3 - Laboratory test results documenting permeability of in-place soil must be included in Attachment XV.			
4 - Witness zone monitoring program must be included on the Site Monitoring Plan in Attachment III.			
5 - Alternate final cover demonstration must be included in Attachment XVI.			
6 - To receive approval for recirculation the irrigated area must be a Sanitary Landfill and underlain by a composite liner or a Research, Development, or Demonstration Plan must be included in Attachment XVII.			
7 - To receive approval for discharge of leachate to surface water an approved VPDES permit must be included in Attachment VIII.			
8 - A description of the proposed method must be included in Attachment VIII.			
9 - Only Sanitary landfills with a liner in accordance with 9VAC20-81-130.J.1 are eligible to submit RDD plans.			

Attachments. The following attachments must be submitted in the order prescribed
Attachment I: Notice of Intent
Attachment II: VDOT Adequacy Report and Approval Letter (If increasing Daily Disposal Limit)
Attachment III: Design Plans
Attachment IV: Closure Plan
Attachment V: Post Closure Plan
Attachment VI: Design Report
Attachment VII: Construction Quality Assurance (CQA) Plan and Technical Specifications (these are included as Appendices to Attachment IV)
Attachment VIII: Leachate Management Plan
Attachment IX: Landfill Gas Plans
Attachment X: Groundwater Monitoring Plan (to be submitted at a later date)
Attachment XI: Groundwater Corrective Action Plan
Attachment XII: Financial Assurance Documentation
Attachment XIII: Special Waste Documentation
Attachment XIV: Alternate Liner Demonstration
Attachment XV: Laboratory Test Results Documenting Permeability of In-place Soils
Attachment XVI: Alternate Final Cover Demonstration
Attachment XVII: Research, Development, and Demonstration Plan

Responsible Official Signature:	
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.	
Name: David A. Craymer	Title: Vice President, Power Generation System Operations
Signature: 	Date: 1/7/16