

# SOUTHERN ENVIRONMENTAL LAW CENTER

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April 23, 2015

Thomas Faha, Regional Director  
Northern Regional Office  
Virginia Department of Environmental Quality  
13901 Crown Court  
Woodbridge, VA 22193

Re: Dominion's cap-in-place plans for the Possum Point coal ash ponds

Dear Mr. Faha:

Thank you for meeting with us in March to discuss the coal ash ponds at the Possum Point power plant. On behalf of our client, the Potomac Riverkeeper, we are writing to bring your attention to problems raised by Dominion's March 30, 2015, proposal to close these coal ash ponds.<sup>1</sup>

Quantico Creek is a popular recreational and commercial fishery that has experienced decades of pollution from the Possum Point coal ash ponds. Dominion's monitoring records document almost thirty years of unchecked groundwater contamination by cadmium, zinc, and other metals at the site. This contaminated groundwater discharges into Quantico Creek just a short distance from the ponds. Other leaks and seeps in the earthen berms surrounding the ponds send contaminants directly into the creek.

In our view, Dominion's proposed excavation of pond E is one step in the right direction to end the ongoing contamination of this waterway by metals leached from waste coal ash at this facility. But, as we describe in more detail below, Dominion must also pursue clean closures for ponds A, B, C, and pond D to ensure that arsenic, cadmium, selenium, zinc, and other harmful metals do not continue to discharge to Quantico Creek and the groundwater at this site.

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<sup>1</sup> See Letter from Cathy Taylor, Dominion Resources, Inc., to James Golden, Va. Department of Environmental Quality (March 30, 2015) (Attachment A).

## Pond E

Dominion intends to excavate coal ash from pond E and place it into pond D.<sup>2</sup> We agree that the company must excavate the coal ash from pond E to stop the leak of contaminants from this pond. Pond E contains 19.6 million cubic feet of coal ash<sup>3</sup> and enough metals to contaminate Quantico Creek and groundwater for decades. According to Dominion's groundwater monitoring reports, cadmium, zinc, and other metals have leached into the groundwater from this pond for almost thirty years.<sup>4</sup> These metals often occur at levels many times Virginia's groundwater protection standards.<sup>5</sup> For example, cadmium in the groundwater at monitoring well ES-3A has reached levels as high as 46 times the state standard.<sup>6</sup> This contaminated groundwater then flows into Quantico Creek just a short distance away.<sup>7</sup>

Dominion acknowledges that pond E also leaks contaminants through its earthen berm directly into Quantico Creek. After we notified the company that metals were present in Quantico Creek near the toe of the pond E berm,<sup>8</sup> Dominion applied for a permit to discharge storm water associated with industrial activity at two locations along

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<sup>2</sup> *See id.* at 2.

<sup>3</sup> *See* Letter from Pamela Faggert, Dominion Resource Services, Inc. to Richard Kinch, U.S. EPA at 16 (Mar. 23, 2009).

<sup>4</sup> *See* URS Corp., 2012 Groundwater Annual Report, Possum Point Power Station at App. C (April 26, 2013) (Attachment B).

<sup>5</sup> *See id.*

<sup>6</sup> *See* URS Corp., 2006 Groundwater Annual Report, Possum Point Power Plant at Table 1 (April 2007).

<sup>7</sup> *See* URS Corp., Site Characterization Report for Ash Pond D and Ash Pond E at 3-9 (Sept. 2004) ("The primary environmental receptor for groundwater associated with Ash Pond D and Ash Pond E is Quantico Creek located approximately 400 to 1,400 feet south of the Site. Groundwater flows south from the site toward Quantico Creek where it discharges into the creek.").

<sup>8</sup> *See* Letter from Greg Buppert, Deborah Murray, and Sarah Fort, Southern Environmental Law Center to Thomas Farrell, Dominion Resources, Inc., & Robert Blue, Va. Electric & Power Company at 5 (Sept. 17, 2014) ("Water samples collected at the base of a concrete pipe conveying water from the toe of ash pond E under Possum Point Road reveal elevated levels of multiple pollutants, including arsenic, cadmium, and zinc.").

the berm.<sup>9</sup> We strongly disagree that a new permit would be an appropriate solution for these leaks. Without excavation, pond E will continue to pollute Quantico Creek and groundwater with metals.

### Ponds A, B, C

We are, however, very concerned that Dominion's plan fails to address ongoing pollution that is also occurring at ponds A, B, and C. In its March 30 letter, the company proposes to cap these ponds in place.<sup>10</sup> We strongly disagree with this approach because it will not eliminate the ongoing pollution from these ash ponds. Therefore, we urge DEQ to require that Dominion excavate these ponds to ensure that coal ash contaminants are not reaching Quantico Creek and the groundwater.

Ash ponds A, B, and C are unlined pits that Dominion dug into existing wetlands in the 1950s.<sup>11</sup> The company abandoned these ponds almost fifty years ago, but they have continued to leak contaminants since then. Groundwater flows laterally through the ash, leaches metals, and then discharges to Quantico Creek. The ponds also leak directly into Quantico Creek through a drain pipe at pond C.<sup>12</sup> Dominion's test of the water flowing out of this pipe revealed the presence of at least seventeen metals, including known toxics like arsenic, copper, and selenium.<sup>13</sup> And Dominion has acknowledged that contaminated water also leaks directly through the earthen berm surrounding the ponds. In its December 2014 permit amendment request, Dominion sought a permit to discharge storm water associated with industrial activity along the earthen berm at pond A.<sup>14</sup>

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<sup>9</sup> See Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity attached to Letter from Cathy Taylor, Dominion Resources, Inc. to Susan Mackert, Va. Department of Environmental Quality (Dec. 22, 2014).

<sup>10</sup> See Letter from Cathy Taylor, *supra* n. 1.

<sup>11</sup> See U.S. Geological Survey, Quantico, VA. – MD. SE/4 Quantico 15' Quadrangle (1952) (Attachment C).

<sup>12</sup> See Dan Demers & Susan Mackert, Va. Department of Environmental Quality, Possum Point Site Visit Memo (April 16, 2015).

<sup>13</sup> See Letter from Cathy Taylor, Dominion Resources, Inc. to Susan Mackert, Va. Department of Environmental Quality (May 2, 2014).

<sup>14</sup> See Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity, *supra* n. 9.

Ponds A, B, and C contain 170,000 cubic yards of waste coal ash<sup>15</sup> and enough metals to contaminate Quantico Creek and groundwater for decades. A cap-in-place closure will not stop the lateral flow of groundwater through the ash. Contaminated groundwater will continue to discharge to Quantico Creek, flow out of the drain pipe at pond C, and leak through the earthen berm. Furthermore, experts have advised us that a cap may increase the amount of arsenic leached from the ash by changing the oxygen environment in the pond under the cap. In other words, not only will a cap not stop the pollution at ponds A, B, and C, it may actually make it worse.

Dominion must excavate these ponds in order to stop the unchecked contamination of Quantico Creek and the groundwater with harmful metals. In fact, it is clear that excavation of A, B, and C is feasible, because Dominion itself sought DEQ approval to do this as part of a proposed sale of the property in 2004.<sup>16</sup> At Dominion's request, the current VPDES permit for Possum Point allows ash excavated from A, B, and C to be placed in pond D.<sup>17</sup>

#### Pond D

Dominion proposes to place the waste ash from pond E into pond D and then cap pond D in place.<sup>18</sup> However, Dominion's records show that a cap-in-place closure for pond D will not stop coal ash contaminants from leaking into Quantico Creek and into groundwater. Pond D contains 70.2 million cubic feet of coal ash<sup>19</sup> and enough metals to contaminate Quantico Creek and groundwater for decades. Dominion must excavate the ash from pond D as well to ensure the long-term protection of this waterway.

In 1966, Dominion dug the original pond D into wetlands deep enough to intersect an aquifer under the site known as "stratum D."<sup>20</sup> In 1986, the company rebuilt pond D to

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<sup>15</sup> See Letter from Cathy Taylor, *supra* n. 13.

<sup>16</sup> See Email from Kevin Greene, Va. Department of Environmental Quality to Karen Sismour, Subject: Possum Point, Dominion Power & fly ash (Feb. 19, 2004) ("Dominion's concept was to excavate the old ash pond and place the excavated ash into a permitted and operating lined ash pond.") (Attachment D).

<sup>17</sup> See Jeff Talbott, Va. Department of Environmental Quality, Memorandum (Mar. 29, 2004) (Attachment E).

<sup>18</sup> See Letter from Cathy Taylor, *supra* n. 1.

<sup>19</sup> See Letter from Pam Faggert at 18, *supra* n. 3.

<sup>20</sup> See GES, Inc., Conceptual Site Model Narrative—Stratum B at Cross Section A – A' (Sept. 20, 2013) (Attachment F).

increase its capacity but kept the existing ash, which was as much as 35 feet deep, in place.<sup>21</sup> Some engineering reports show a slurry wall separating the aquifer from coal ash at the bottom of the pond.<sup>22</sup> We have not been able to confirm that the company ever actually installed this slurry wall. But even if it is in place, the slurry wall does not prevent pollution. Dominion has documented almost thirty years of continuous groundwater contamination from this pond.<sup>23</sup> Monitoring well ED-3 has reported cadmium and zinc at levels above Virginia's groundwater protection standards since 1985.<sup>24</sup>

Furthermore, pond D continuously discharges contaminated water through an engineered toe drain which drains groundwater from its berm.<sup>25</sup> This contaminated water is not collected and treated as part of a leachate collection system but instead flows directly into Quantico Creek.<sup>26</sup> Finally, while Dominion claims that pond D is lined, the pond only has a partial clay liner.<sup>27</sup> Pond D does not have a complete synthetic liner around all of the ash in the pond that would help ensure that leakage is prevented. Public records provide no indication that the company has monitored the clay liner for cracks since its installation in 1986.

Therefore, we expect that if Dominion installs a cap on pond D, groundwater would continue to flow laterally through the ash and leach harmful metals. This contaminated groundwater will continue to flow to Quantico Creek or discharge through the toe drain to Quantico Creek. Furthermore, as we mentioned with ponds A, B, and C, a cap may increase the amount of arsenic leached from the coal ash by changing the oxygen environment of the pond under the cap.

Without raising the bottom of the pond out of the water table and installing a complete liner and leachate collection and treatment system, pond D cannot serve as the permanent repository for coal ash from the Possum Point ponds. Dominion must excavate

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<sup>21</sup> *See id.* at 3.

<sup>22</sup> *See* Cross Section A – A', *supra* n. 20.

<sup>23</sup> *See* 2012 Groundwater Annual Report, Possum Point Power Station at App. C, *supra* n. 4.

<sup>24</sup> *See id.*

<sup>25</sup> *See* Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity, *supra* n. 9.

<sup>26</sup> *See id.*

<sup>27</sup> *See* Cross Section A – A', *supra* n. 20.

the ash in pond D to stop the continuous leak of contaminants into Quantico Creek and into groundwater.

### A Responsible Solution: Excavation and Removal to Dry, Lined Storage

Coal ash storage is a serious pollution problem throughout the Southeast. Several southern states and power companies are successfully removing waste ash to dry, lined storage landfills away from waterways:

- In 2012 and 2013, Santee Cooper and SCE&G, two South Carolina utilities, agreed to excavate and remove all of their waterside coal ash storage ponds.<sup>28</sup> Santee Cooper expects to move 11 million tons of coal ash out of riverside pits in South Carolina by 2020. This cleanup is proceeding faster and at a lower cost than the utility originally estimated.
- In 2013, state regulators in North Carolina sued Duke Energy subsidiaries for groundwater contamination and unpermitted seeps at fourteen coal ash sites. The state's complaints stated that Duke's coal ash pollution "pose[s] a serious danger to the health, safety and welfare of the people of the State of North Carolina and serious harm to the water resources of the State."<sup>29</sup> Duke has now committed to excavating four of those sites.<sup>30</sup>
- In 2014, the South Carolina Department of Health and Environmental Control reached a consent agreement in lieu of litigation with Duke Energy to excavate and remove coal ash from a 19-acre abandoned ash pond at the W.S. Lee Steam Station.<sup>31</sup>

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<sup>28</sup> See Matt Long, SCE&G reaches settlement over Midlands toxic coal ash ponds, South Carolina Radio Network (Aug. 20, 2012) (Attachment G); Robert Anderson, Santee Cooper agrees to haul coal ash away from Conway, myhorrynews.com (Nov. 21, 2013) (Attachment H).

<sup>29</sup> See, e.g., Complaint and Motion for Injunctive Relief, *State of North Carolina ex rel. North Carolina Department of Environment and Natural Resources v. Duke Energy Progress, Inc.* (Superior Ct. for Wake County, N.C., filed Aug. 16, 2013) (Attachment I).

<sup>30</sup> See Letter from John Elnitsky, Senior V.P., Duke Energy to John E. Skvarla, III, Secretary, N.C. Department of Environment & Natural Resources (Nov. 13, 2014) (Attachment J). The excavation plans for the Asheville Steam Electric Generating Plant, the Dan River Steam Station, the L.V. Sutton Electric Plant, and the Riverbend Steam Station are available at: <http://portal.ncdenr.org/web/wq/ca-excavation-plans>.

<sup>31</sup> See Consent Agreement 14-13-HW, *In re: Duke Energy Carolinas, LLC, W.S. Lee Steam Station, Anderson County* (Sept. 29, 2014) (Attachment K).

- In January 2015, Tennessee brought an enforcement action against a TVA coal ash facility on the Cumberland River for groundwater contamination and seeps in violation of the Tennessee Water Control Law and the terms of the facility's NPDES permit.<sup>32</sup> While this case is still pending, local conservation groups have intervened seeking excavation and removal.

The federal government and state regulators have also levied criminal and civil penalties in response to unchecked coal ash pollution in North Carolina:

- In February 2015, the United States brought criminal charges against Duke Energy subsidiaries for the negligent discharge of coal ash waste at five North Carolina power plants.<sup>33</sup> Duke agreed to pay \$102 million in penalties and restitution to settle the charges.<sup>34</sup>
- In March 2015, North Carolina imposed a \$25 million fine on Duke Energy for violation of the state's Groundwater Quality Standards for arsenic, boron, iron, manganese, selenium, and thallium at the L.V. Sutton Electric Plant near Wilmington.<sup>35</sup> Duke Energy had documented the violations as part of the groundwater monitoring requirements established in its NPDES permit.

In view of the history of unchecked coal ash pollution from the Possum Point facility into Quantico Creek, the Potomac Riverkeeper requests that DEQ require Dominion to excavate the site's coal ash ponds and remove the material to a landfill with the proper liner system and leachate collection and treatment system. We urge DEQ to follow the example of its neighboring states and tackle Virginia's coal ash contamination with a responsible, long term solution.

Thank you for your attention to this important matter. Please contact me at 434.977.4090 or gbuppert@selcva.org to talk further about these issues.

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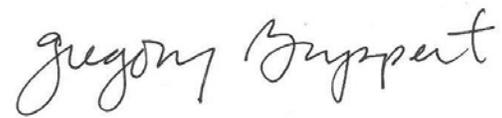
<sup>32</sup> See Complaint, *State of Tennessee ex rel. Herbert H. Slatery III v. Tenn. Valley Auth.*, Civil Case No. 15-23-II (Chancery Ct., 20<sup>th</sup> Judicial District, Davidson County, Tenn., filed Jan. 7, 2015) (Attachment L).

<sup>33</sup> See Criminal Bills of Information filed in the Eastern, Middle, and Western District of North Carolina on Feb. 20, 2015 (Attachment M).

<sup>34</sup> See Rebecca Smith, *Duke Energy Agrees to Pay \$102 Million for Coal-Ash Spill*, Wall Street Journal (Feb. 20, 2015) (Attachment N).

<sup>35</sup> See Letter from S. Jay Zimmerman, N.C. Department of Environment & Natural Resources, to Harry K. Sideris, Duke Energy (Mar. 10, 2015) (Attachment O).

Sincerely,

A handwritten signature in black ink that reads "Gregory Buppert". The signature is written in a cursive, flowing style.

Gregory Buppert, Senior Attorney  
Southern Environmental Law Center  
*Counsel for the Potomac Riverkeeper*

cc:

David Paylor, Director  
Virginia Department of Environmental Quality  
P.O. Box 1105  
Richmond, VA 23218