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April 6, 2017

Nathaniel J. Davis, Sr., Deputy Secretary  
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Re: Draft Environmental Impact Statement for the Atlantic Coast Pipeline, LLC,  
Dominion Transmission, Inc. (CP15-554-000 and CP15-555-000)

Dear Commissioners:

Chesapeake Bay Foundation, Inc. (CBF) hereby submits its comments concerning the draft Environmental Impact Statement (DEIS), dated December 2016, prepared by the Federal Energy Regulatory Commission (FERC) concerning the applications of the Atlantic Coast Pipeline, LLC and Dominion Transmission, Inc. (DTI) for the Certificates of Public Convenience and Necessity<sup>1</sup> that are required to construct and operate two interstate natural gas transmission pipelines, the Atlantic Coast Pipeline (ACP) and the Supply Header Pipeline (SHP) (jointly, the Project”).<sup>2</sup>

CBF earlier submitted two sets of scoping comments to assist FERC in the development of the EIS.<sup>3</sup> These comments focused on the Project’s direct and indirect environmental impacts to the air and water resources with particular reference to those that will or may affect the Chesapeake Bay, a “national treasure”<sup>4</sup> seriously degraded by decades of nutrient and sediment pollution and now beginning to show signs of recovery resulting from a massive multi-year, multi-state/federal partnership.<sup>5</sup>

The DEIS identifies and assesses some of the Project’s environmental effects, finding adverse temporary and permanent impacts but concluding that proposed minimization and mitigation measures, along with additional steps recommended by FERC staff in the DEIS, will reduce most to “less-than-significant levels.” However,

<sup>1</sup> See Natural Gas Act, 15 U.S.C. §§ 717 *et seq.* (2005).

<sup>2</sup> These comments principally focus on the ACP segments in Virginia (AP-1, AP-3 and AP-4); however, many impacts from the related Supply Header Project (SHP) are also addressed.

<sup>3</sup> See CBF Comment Letter, dated April 27, 2015, (Docket PF15-6-000, Accession number 20150427-5338); CBF Comment Letter, dated June 2, 2016 (Docket CP15-554-000, Accession number 20160603-5078).

<sup>4</sup> See EO 13508, dated May 12, 2009 (referring to the Chesapeake Bay).

<sup>5</sup> U.S. Env’tl. Prot. Agency, *Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorous and Sediment*, dated December 29, 2010, available at <https://www.epa.gov/chesapeake-bay-tmdl/chesapeake-bay-tmdl-document>. (“TMDL”).

as indicated below, the DEIS affords scant analysis of important impacts to wetlands, inadequate evaluation of the water quality impacts from Project-caused sedimentation, and deficient investigation of Project-related nitrogen oxide (NO<sub>x</sub>) emissions to the environment, including the Chesapeake Bay. We urge FERC to correct these deficiencies in the final environmental impact statement (EIS) as required by the National Environmental Policy Act.<sup>6</sup>

## I. PROJECT BACKGROUND

The Project entails construction and operation of an extensive interstate natural gas pipeline complex to traverse more than 600 miles in Virginia, additional major portions in West Virginia and North Carolina, and more than 21 miles across national forest lands in Virginia and West Virginia.<sup>7</sup> It will consist of two main pipeline facilities, three pipeline laterals,<sup>8</sup> three new compressor stations and other infrastructure that will be capable of delivering up to 1.5 billion cubic feet per day of natural gas to customers in Virginia, North Carolina, and West Virginia.<sup>9</sup>

The Project would disturb more than 12,000 acres of land for construction and require ongoing operation on almost 6,000 acres.<sup>10</sup> Over 400 existing roads will be upgraded, 82 new roads will be needed for construction activities, and 507 permanent roads will be needed for ongoing maintenance and operations.<sup>11</sup> Construction will include excavation of deep trenches for pipeline installation that will disturb 32.5 miles of karst terrain in Virginia, with related impacts to sensitive groundwater, cave systems and spring systems.<sup>12</sup> Notably, 108 miles of the pipeline routes will impact mountainous terrain with slopes greater than 20%.<sup>13</sup> Further, building the pipeline will require 1,787 water body crossings in Virginia alone,<sup>14</sup> including more than 50 within national forest areas.<sup>15</sup> The Project pipelines (ACP and SHP) will temporarily impact 786.2 acres of wetlands and permanently impact 248.3 acres.<sup>16</sup> Construction of related new aboveground facilities and access roads will permanently impact 9.6 wetland acres.<sup>17</sup>

The Project is characterized as having a broad public purpose and need: (1) serving the growing energy demands public utilities and distribution companies; (2)

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<sup>6</sup> 42 U.S.C. §§ 4321 *et seq.* (1970).

<sup>7</sup> DEIS 2-1.

<sup>8</sup> DEIS 2-1.

<sup>9</sup> DEIS ES-1.

<sup>10</sup> DEIS 2-15 to 2-17.

<sup>11</sup> DEIS 2-25.

<sup>12</sup> DEIS 4-7.

<sup>13</sup> DEIS ES-4.

<sup>14</sup> DEIS 4-87.

<sup>15</sup> DEIS 4-113.

<sup>16</sup> Tbl. 4.3.3-1, DEIS 4-120; DEIS 5-6.

<sup>17</sup> DEIS 5-6.

providing natural gas for direct residential, commercial, and industrial uses; (3) increasing the reliability and security of natural gas supplies in these states; and (4) providing access to a low cost supply hub with multiple natural gas traders for electricity generation on the daily and futures markets.

## II. THE NATIONAL ENVIRONMENTAL POLICY ACT REQUIRES A “HARD LOOK”

Because the Project is a “major federal action significantly affecting . . . the human environment,”<sup>18</sup> NEPA requires FERC to prepare an adequate EIS before issuing the requested Certificates of Public Convenience and Necessity.<sup>19</sup> Stating the nation’s environmental policy “to create and maintain conditions under which man and nature can exist in a productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans,”<sup>20</sup> NEPA requires a covered project’s lead agency to take a “hard look” at its likely environmental impacts to ensure they “will not be overlooked or underestimated only to be discovered after the resources have been committed.”<sup>21</sup>

NEPA, first of all, makes environmental protection a part of the mandate of every federal agency and department. . . . It is not only permitted, but compelled, to take environmental values into account. Perhaps the greatest importance of NEPA is to require . . . agencies to *consider* environmental issues just as they consider other matters within their mandates.<sup>22</sup>

An adequate EIS must assess the environmental impacts of the project that cannot be avoided. Direct impacts (occurring at the same time and place), indirect effects (reasonably foreseeable impacts occurring later in time or farther removed in

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<sup>18</sup> NEPA, § 102(2)(C); 40 C.F.R. § 1502.4.

<sup>19</sup> See 18 C.F.R. § 380.7 (FERC requires EIS to include staff conclusions, summaries of the significant environmental impacts, alternatives, the staff’s preferred action, any mitigation measures proposed by the applicant, any significant environmental impacts that cannot be mitigated, and references to any studies that might provide additional data to decision makers and the public).

<sup>20</sup> NEPA, § 101(a); 40 C.F.R. § 1500.1(a).

<sup>21</sup> *Robertson v Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

<sup>22</sup> *Calvert Cliffs’ Coordinating Comm., Inc. v. Atomic Energy Comm’n*, 449 F.2d 1109, 1112 (D.C. Cir. 1971) (J. Skelly Wright) (emphasis in original). See also *Silva v. Lynn*, 482 F. 2d 1282 (1st Cir. 1973) (EIS permits courts to ascertain whether the agency has made a good faith effort to take into account the values NEPA seeks to safeguard).

distance) and cumulative impacts<sup>23</sup> must be included.<sup>24</sup> The discussion must also evaluate the *efficacy* of proposed avoidance measures, whether through actual avoidance, minimization, restoring or rehabilitating the affected resources, reducing or eliminating the impact over time through preservation or maintenance, or compensating by providing substitute resources.<sup>25</sup> The EIS must discuss the mitigation measures in sufficient detail to ensure that environmental consequences have been fairly evaluated.<sup>26</sup> The evaluation of impacts and avoidance must take place before a project is approved and not depend on the results of future studies.<sup>27</sup>

The EIS must also objectively evaluate all reasonable alternatives—that is, those that substantially meet the agency’s purpose and need and that are practical or feasible from a technological and economic standpoint, using common sense. Alternatives that have been eliminated from detailed study,<sup>28</sup> as well as a “no action” alternative, must be addressed. The EIS must consider local short term uses of the environment, the maintenance and enhancement of long term productivity, and any irreversible commitments of natural resources that the proposal would entail.<sup>29</sup>

To ensure the final EIS meets these standards, the deficiencies of the DEIS identified below will have to be addressed.

### **III. THE DEIS DISCUSSION OF SURFACE WATER AND AIR IMPACTS FALLS SHORT OF NEPA’S “HARD LOOK” REQUIREMENT**

#### **A. The DEIS Assessment of the Project’s Wetlands Impacts is Inadequate**

CBF has a long history of working to protect wetlands, including analysis of wetland impacts from large projects, many of which have explored important questions under the Clean Water Act, the State Water Control Law and Virginia’s Nontidal Wetlands Act and Water Protection Program.<sup>30</sup> These efforts have been directed toward substantially improving the water quality, productivity, and resiliency

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<sup>23</sup> Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

<sup>24</sup> NEPA §102(2)(C); 40 C.F.R. § 1502.16 (a)–(b); *Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir. 1992) (Reasonably foreseeable effects are so “sufficiently likely to occur that a person of ordinary prudence would take [them] into account in reaching a decision.”).

<sup>25</sup> 40 C.F.R. §§ 1502.14(f), 1508.20; DEIS 2-26.

<sup>26</sup> *Methow Valley Citizens Council*, 490 U.S. at 352.

<sup>27</sup> 40 C.F.R. § 1500.1(a); *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n. 21 96 S. Ct. 2118, 2730 n. 21 (1976).

<sup>28</sup> 40 C.F.R. § 1502.14.

<sup>29</sup> 42 U.S.C. § 4332(i)-(v) (1975).

<sup>30</sup> *E.g.*, King William Reservoir Proposal, Route 460 expansion.

of the ecosystem; encouraging the diversity and abundance of its living resources; and maintaining a high quality of life for the people of the Chesapeake Bay region. CBF supports federal and state agency requirements to avoid, minimize, and mitigate wetland impacts to ensure that no net loss of wetland acreage or function occurs.<sup>31</sup>

#### *Wetland Status and Historic Trends in Virginia*

Due to the vast massive wetland loss contemplated for the construction of the Atlantic Coast Pipeline,<sup>32</sup> CBF urges consideration of the status and historic trends of wetlands in shaping state and federal authorizations for this project. Historic development activities, agriculture, and infrastructure construction have caused North Carolina, Pennsylvania, Virginia and West Virginia to suffer tremendous losses in wetland acreage and its associated functions and values. These losses have substantially contributed to the degradation and eutrophication of receiving waters, including Chesapeake Bay. Many of these receiving waterways have been categorized as impaired for various designated uses and consequently have total maximum daily loads (TMDLs) and watershed implementation plans (WIPs) which are focused on restoring them to water quality standards. Efforts to restore these natural resources involve a substantial investment by citizens of Pennsylvania, Virginia, West Virginia and North Carolina.

State administered wetland mitigation programs which have been developed relatively recently have slowed the loss of wetlands through requiring mitigation and are intended to result in “no net loss of existing wetland acreage and functions.” While stream and wetland mitigation can be a beneficial tool, the National Research Council (NRC)<sup>33</sup> and the scientific literature<sup>34</sup> have documented that mitigation projects often fail to achieve pre-impact levels of ecosystem services and benefits; thus, EPA and DEQ have committed to prioritizing avoidance and minimization over mitigation.<sup>35</sup> Consequently, it is unclear that addressing large-scale impacts to wetlands through mitigation will result in no net loss of function.

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<sup>31</sup> See CBF, *State of the Bay Report* at 6 (2005); see also *Alliance to Save the Mattaponi v. U.S. Army Corps of Engineers*, 606 F.Supp.2d 121 (D.D.C. 2009) (CBF and others contended that Army Corps of Engineers violated no net loss policy by approving permit for reservoir on Cohoke Creek).

<sup>32</sup> See DEIS 4-123 (Construction of the ACP would temporarily impact 783.4 acres and permanently impact 247.5 acres of wetlands; construction of the SHP would temporarily impact 2.8 acres and permanently impact 0.8).

<sup>33</sup> NATIONAL RESEARCH COUNCIL ET AL., COMPENSATING FOR WETLAND LOSS UNDER THE CLEAN WATER ACT (2001).. Committee on Mitigating Wetland Losses, Board on Environmental Studies and Toxicology, Water Science and Technology Board, Division on Earth and Life Studies

<sup>34</sup> Barbara L. Bedford, *Cumulative effects on wetland landscapes: Links to wetland restoration in the United States and southern Canada*, 19 WETLANDS 775 (1999) ; Joy B. Zedler, *Progress in wetland restoration ecology*, 15 TRENDS IN ECOLOGY & EVOLUTION 402.

<sup>35</sup> Compensatory Mitigation for Losses of Aquatic Resources, 73 Fed. Reg. 19,594 (Apr. 10, 2008) (codified at 40 C.F.R. pt. 230).

The level of wetland impacts proposed with the Project pipelines (ACP and SHP)--786.2 temporary, 248.3 permanent<sup>36</sup>-- are significantly greater than those impacts associated with other major projects that were not able to proceed.<sup>37</sup> To our knowledge, since the Clean Water Act was adopted, no project with the level of wetland impacts proposed in this Project has ever been permitted and completed in the Commonwealth of Virginia.<sup>38</sup> From that perspective, the unprecedented scale of the wetland impacts to be created by this Project underscores the importance of a careful evaluation of both direct and indirect effects and the importance of specific details establishing whether and how mitigation will achieve “no net loss of function.”

Despite these concerns, the current draft EIS does not include a specific, detailed mitigation plan, leaving it unclear whether there is even potential for mitigation to lead to no net loss of function for the wetland losses proposed. Under NEPA standards, FERC may neither rely on future permitting expected to be undertaken by another agency,<sup>39</sup> nor wait to review the results of future studies,<sup>40</sup> to assess this question.

*Recommendation:* CBF recommends that the final EIS include a detailed wetland mitigation plan.<sup>41</sup> This plan should include a detailed assessment of the functional losses associated with the proposed impacts as well as clear evidence and a fully supported assessment of whether the proposed mitigation plan will replenish these functions and therefore result in no net loss of acreage *and* functions.

## **B. The DEIS Assessment of the Project’s Surface Waters from Sedimentation is Inadequate**

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<sup>36</sup> See *supra* note 32.

<sup>37</sup> For example, the proposals (which did not receive federal authorization) for a massive expansion of Virginia Route 460 and the attempt to build a major reservoir in King William, Virginia, both involved large scale wetland impacts.

<sup>38</sup> CBF Communication with USACE Staff (January 2016).

<sup>39</sup> *South Fork Council of Western Shoshone of Nev. v. U.S. Dept. of the Interior*, 588 F.3d 718, 726 (9th Cir. 2009) (state government-issued permit cannot satisfy a federal agency’s obligations to evaluate environmental impacts under NEPA) (citing *Klamath-Siskiyou Wildlands Center v. BLM*, 387 F.3d 989, 997 (9th Cir. 2004)); *Webster v. U.S. Dept. of Agric.*, No. 2:09-CV-138, 2011 WL 8788223 (N.D.W. Va., June 13, 2011) (whether an EIS meets the standards for an adequate statement does not turn on whether or not a mitigation plan would subsequently be formulated by another agency; it turns on whether or not the plan satisfies NEPA).

<sup>40</sup> *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n. 21, 96 S. Ct. 2118, 2730 n. 21 (1976).

<sup>41</sup> See DEIS 4-125 (recommending that ACP submit final wetland mitigation plans and documentation of approval by the United States Corps of Engineers).

In its earlier submitted scoping comments, CBF and others identified the potential for increased sedimentation of surface waters from project construction and operation as important environmental impacts to be addressed. The DEIS fails adequately to evaluate these impacts.

Multiple aspects of Project construction and operation will create risks of increased sedimentation to waterbodies across a wide swath of the Chesapeake Bay watershed in Virginia and neighboring states. Examples from the lengthy period of active construction, many of which the DEIS acknowledged, include the large scale tree clearing,<sup>42</sup> road building, massive excavation for trench digging, overburden handling, and other activities over miles of often very steep and currently forested slopes within the pipeline's path.<sup>43</sup> Moreover, as the DEIS points out, risks to water quality from increased turbidity and sedimentation will also be created by construction activities that affect stream channels and adjacent banks related to myriad waterbody crossings, including within the Monongahela and George Washington National Forests. Following construction, the risk of erosion and sedimentation from the previously-active construction sites, particularly from the denuded and disturbed segments on steep slopes, will continue throughout the Project's operational periods.

Given these circumstances, NEPA requires the agency to conduct a careful exploration of the extent of the anticipated impacts and provide an analysis of the effectiveness of measures proposed to avoid, minimize and mitigate them. Unfortunately, the DEIS falls short of meeting this standard with respect to the risk of increased sedimentation. The DEIS gives these impacts scant treatment, dismissing them as merely temporary or transient and failing to discuss the need for adequate modeling that takes into account effects on local streams and on downstream locations, as well as the cumulative effects of even transient discharges from construction and operation of the vast number of pipeline miles and stream crossings at issue.<sup>44</sup>

The lack of information essential to understanding the extent of impacts and the evaluation of mitigation efficacy is major problem in the DEIS. For example, the DEIS acknowledged that information on planned water crossings is not complete; for some of the major waterbody crossings, the design specifications and crossing locations have changed such that site-specific construction and restoration measures have not been incorporated into the plans.<sup>45</sup> FERC staff noted this omission and recommended that the Project Applicant file and secure written approval of site-specific crossing plans, including location and type of bridges, water discharge

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<sup>42</sup> See *e.g.*, DEIS 4-41-4-64; 4-100-4-102.

<sup>43</sup> *Id.*

<sup>44</sup> See, *e.g.*, DEIS 4.1.4 (referencing ACP's 84 miles of slopes of greater than 20%).

<sup>45</sup> DEIS ES-9.

structure locations, agency-imposed time of year rules, and construction and restoration requirements. Even without having reviewed such site-specific plans, FERC staff nonetheless concluded that construction and operation-related impacts would be effectively mitigated.<sup>46</sup> This conclusion is plainly premature, given the well-settled rule that the promise of future studies does not substitute for the required evaluation of the effectiveness of the proposed mitigation.<sup>47</sup> As one court explained, “[w]e fail to see how mitigation measures can be properly analyzed and their effectiveness explained when they have yet to be fully developed.”<sup>48</sup>

In a similar vein, the DEIS also pointed out that the Applicant had not then provided the information requested by the Forest Service on potential project-induced hazards, risks to safety and natural resources, and the effectiveness of proposed mitigation measures in the steeply sloped environment.<sup>49</sup> To address these deficiencies, FERC staff recommended that the Applicant file the “plans, typical drawings, and site-specific designs of representative construction segments to display the magnitude of the proposed slope modifications.”<sup>50</sup> Yet without waiting for these details, the DEIS prematurely concluded that these potential risks would be “adequately minimized.”<sup>51</sup> (Following the issuance of the DEIS, the Applicant submitted limited information on designs for two high-hazard locations, 0.3 miles on Clover Lick Mountain, Pocahontas County, West Virginia, and 0.1 mile on Big Mountain in Highland County, Virginia. Produced well after DEIS publication, there has been insufficient time before the current comment deadline for a full review. It is clear, however, that the scant information submitted—regarding 0.4 miles of the proposed route—is strikingly inadequate to allow for assessment of the impacts and the efficacy of the proposed mitigation measures).

The DEIS’s strategy of referring to the presumed application of best management practices required by state law and state-issued permits, including construction general permits and associated stormwater pollution prevention plans (SWPPPs) for controlling runoff and meeting pollution limits, also fails to meet NEPA’s “hard look” requirement in the absence of a review of the state rules and an analysis of the expected effectiveness of these measures along the specific routes, and in the rugged terrain, at issue. It is well-settled that NEPA prohibits a federal agency to “pass the buck” to state regulatory agencies and thereby to circumvent its own NEPA obligation to conduct an adequate investigation.<sup>52</sup> Moreover, no such analysis

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<sup>46</sup> DEIS ES-9; 4-89.

<sup>47</sup> *LaFlamme v. Fed. Energy Regulatory Comm’n*, 852 F.2d 389, 400 (9th Cir. 1988);

<sup>48</sup> *Id.* at 400 (quoting *Oregon Nat. Res. Council v. Marsh*, 832 F.2d 1489, 1493 (9th Cir. 1989)).

<sup>49</sup> DEIS ES-5.

<sup>50</sup> *Id.*

<sup>51</sup> *Id.*

<sup>52</sup> *South Fork Council of Western Shoshone of Nevada*, 588 F. 3d 718 (state government-issued permit cannot satisfy a federal agency’s obligations to evaluate environmental impacts under NEPA) (citing *Klamath-Siskiyou Wildlands Center v. BLM*, 387 F. 3d 989, 998 (9th Cir. 2004));

could be done at this time as the Applicant has not submitted its proposed erosion and sediment control plans for the Virginia segments, nor provided stormwater management plans (remarkably contending that stormwater management plans are not required because runoff conditions will be restored to the predevelopment runoff condition).<sup>53</sup>

*Recommendations.* The Applicant should be required to provide detailed site-specific information pertinent to understanding the turbidity, sedimentation and related impacts to water quality in all local and downstream waterbodies (not just those affected by wet open-cut crossing methods)<sup>54</sup> from construction and operation of the pipeline, especially (but not exclusively) in the steep sloped, heavily forested and/or karst-affected terrain. Such information should include detailed site-specific erosion and sediment control plans, stormwater management plans for post-construction runoff control; and modeling data that addresses the anticipated duration, extent, and magnitude of turbidity levels, assesses the potential impacts on resident biota; discusses physical and chemical characteristics of the sediments, estimates area affected by the transport and redistribution of the sediments, and evaluates the effect of suspension and resettlement on water quality and of the effectiveness of proposed mitigation measure to reduce turbidity and sedimentation. The referenced information, and all information specifically requested by FERC staff in this DEIS, should be considered by FERC staff, with the final EIS to include a careful evaluation of the effectiveness of all planned best management practices and other avoidance and minimization measures.<sup>55</sup>

### **C. The DEIS Assessment of the Project's Air and Water Quality Impacts from NO<sub>x</sub> Emissions is Inadequate**

The proposed Project is located almost entirely within the Chesapeake Bay airshed.<sup>56</sup> Accordingly, nitrogen oxide (NO<sub>x</sub>) emissions from the Project will impact the Bay and Bay tributaries. The Environmental Protection Agency's Chesapeake

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*Webster v. U.S. Dept. of Agric.*, No. 2:09-CV-138, 2011 WL 8788223 (N.D.W. Va., June 13, 2011) (whether an EIS meets the standards for an adequate statement does not turn on whether or not a mitigation plan would subsequently be formulated by another agency; it turns on whether or not the plan satisfies NEPA).

<sup>53</sup> Construction, Operations, and Maintenance Plans, Draft, Prepared by ERM, August 2016 (submitted by ACP to FERC and the U.S. Forest Service, August 22, 2016) (FERC Docket CP15-554-000, Accession No. 20160824-5160).

<sup>54</sup> *Cf.* DEIS 4-102 (recommending modeling of turbidity and sedimentation arising from proposed used of wet open-cut crossing method for all major waterbodies).

<sup>55</sup> *See id.* (DEIS recommending that ACP submit site-specific modeling plans for all major water bodies to be crossed via a wet open-cut method that addresses associated turbidity and sedimentation).

<sup>56</sup> Emma Andrews, *Map: Chesapeake Bay Airshed*, CHESAPEAKE BAY PROGRAM (Feb. 7, 2008), [http://www.chesapeakebay.net/maps/map/chesapeake\\_bay\\_airshed](http://www.chesapeakebay.net/maps/map/chesapeake_bay_airshed).

Bay Program identified atmospheric deposition of nitrogen as the highest nitrogen input load to the Chesapeake Bay watershed.<sup>57</sup> Atmospheric nitrogen comes from nitrogen oxides (NO<sub>x</sub>) and ammonia (NH<sub>3</sub>). The principle sources of NO<sub>x</sub> are air emissions from industrial-sized boilers and internal combustion engines, such as the engines that will be used at the Project's compressor stations.<sup>58</sup> In addition to nitrogen deposition to waterways, NO<sub>x</sub> can combine with volatile organic compounds (VOCs) in sunlight to create ground level ozone, a human health hazard.<sup>59</sup>

The DEIS explains that “[a]ir emissions would be generated during construction of the new mainline and lateral pipelines, modifications at four existing compressor stations, construction of three new compressor stations, and construction of ten new M&R stations.”<sup>60</sup> The construction of the ACP and SHP would take two years and would generate 3,720 tons of NO<sub>x</sub>.<sup>61</sup> Once the Project is operating, the ACP and SHP will emit an estimated 217 tons of NO<sub>x</sub> per year.<sup>62</sup> Compared to point sources of NO<sub>x</sub> in Virginia in 2015, the Project's annual emission of 217 tons of NO<sub>x</sub> would rank as the 34th largest source of NO<sub>x</sub> emissions in Virginia.<sup>63</sup> During the two years of the Project's construction, the emissions would rank around the sixth largest source of NO<sub>x</sub> emissions in Virginia.<sup>64</sup> Although the Project's emissions would be distributed across multiple states and therefore impacts would be different than those from a single point source, this comparison is helpful to provide some context for the cumulative emissions that will result from the Project.

Using compressor station information provided in air permit applications for the Project<sup>65</sup> and the CALPUFF air modeling system, CBF estimates that the Project

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<sup>57</sup> Chesapeake Bay TMDL, App'x L: Setting the Chesapeake Bay Atmospheric Nitrogen Deposition Allocations, L-1 (2010), [https://www.epa.gov/sites/production/files/2015-02/documents/appendix\\_l\\_atmos\\_n\\_deposition\\_allocations\\_final.pdf](https://www.epa.gov/sites/production/files/2015-02/documents/appendix_l_atmos_n_deposition_allocations_final.pdf).

<sup>58</sup> *Id.*

<sup>59</sup> See *Health Effects of Ozone Pollution*, EPA, <https://www.epa.gov/ozone-pollution/health-effects-ozone-pollution>.

<sup>60</sup> DEIS 4-450.

<sup>61</sup> See DEIS 4-451.

<sup>62</sup> See DEIS, Tables 4.11.1-7, 1-8, and 1-9, at 4-453 (three ACP compressor stations: 114.3 tpy; ACP metering and regulation stations: 6.99 tpy; four SHP compressor stations: 95.4 tpy).

<sup>63</sup> See Virginia Dep't of Env'tl. Quality, Emission Inventory, 2015 Point Source Criteria Pollutant Emissions Reports, "Point Sources with Criteria Pollutant Emissions of 100 Tons or More," <http://www.deq.virginia.gov/Programs/Air/AirQualityPlanningEmissions/EmissionInventory.aspx>.

<sup>64</sup> *Id.* (estimating that total construction emissions of 3,720 tons per two years would be distributed evenly as 1,860 tpy).

<sup>65</sup> See ACP and SHP Air Permit Applications, FERC Docket CP15-554, Accession No. 20151001-5220 (filed Oct. 1, 2015), available at <https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14002125>; see also, Atlantic Coast Pipeline, Resource Report 9, FERC Docket CP-15-554, Accession No. 20150918-5212, at 9-37-9-59 (filed Sep. 18, 2015), available at <https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13990956>.

emissions would contribute an additional 13,297 pounds of nitrogen deposition per year to the land and water within the Chesapeake Bay watershed.<sup>66</sup> Of this total, the James River watershed will receive an estimated 4,213 pounds of nitrogen deposition per year. The James River watershed—like all sub-watersheds within the Bay watershed—is subject to specific nitrogen allocations in the Bay TMDL.<sup>67</sup> The Bay watershed jurisdictions are responsible for meeting these nitrogen allocations and this additional load of nitrogen pollution must be accounted for and managed by each jurisdiction.

As discussed above, the Chesapeake Bay TMDL accounted for all existing sources of nitrogen in the watershed and established pollution caps that are maintained through implementation of each state’s Watershed Implementation Plan (WIP); offsets are required for new sources. The direct, indirect, and cumulative impacts analyses in the DEIS fail to discuss the water quality impacts due to atmospheric nitrogen deposition, both within the HUC-10 watersheds or the larger context of the Chesapeake Bay watershed. FERC should identify the Project’s increased deposition of nitrogen to land and surface waters and should address how this new load of nitrogen will be offset or accounted for within the Bay TMDL framework.

In addition to nitrogen deposition to land and waterways, nitrogen dioxide (NO<sub>2</sub>)—one type of NO<sub>x</sub> gas—can irritate airways in the human respiratory system.<sup>68</sup> National Ambient Air Quality Standards (NAAQS) for NO<sub>2</sub> establish the limits necessary to protect human health and welfare. Relying upon AERMOD modeling performed by the Project Applicant, the DEIS concludes that neither the ACP compressor stations or the SHP compressor stations would cause or contribute to a violation of the NAAQS for NO<sub>2</sub>.<sup>69</sup> However, because of the results of this modeling, FERC staff should carefully examine the dataset inputs and background assumptions used by the Applicant.

The Applicant used AERMOD in a screening mode (the MAKEMET meteorological dataset), in which the source and receptors are defined completely but the meteorological data are not actual/observed data, but rather represent a “worst-

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<sup>66</sup> This estimate only includes operating emissions from the three new (Marts, Buckingham, and Northampton) and three modified (Crayne, JB Tonkin, and Mockingbird Hill) compressor stations and does not include construction emissions.

<sup>67</sup> See Chesapeake Bay TMDL, Section 9. Chesapeake Bay TMDLs, “Table 9-1. Chesapeake Bay TMDL total nitrogen (TN) annual allocations (pounds per year) by Chesapeake Bay segment to attain Chesapeake Bay WQS,” at 9-4 (2010), *available at* [https://www.epa.gov/sites/production/files/2014-12/documents/cbay\\_final\\_tmdl\\_section\\_9\\_final\\_0.pdf](https://www.epa.gov/sites/production/files/2014-12/documents/cbay_final_tmdl_section_9_final_0.pdf).

<sup>68</sup> See EPA, Health Effects of NO<sub>2</sub>, <https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects>.

<sup>69</sup> DEIS at 4-455, 4-457.

case” scenario.<sup>70</sup> The screening mode only provides estimates of hourly impacts. The thinking behind this approach is that if the Project does not violate the NAAQS using the screening approach, then the Applicant would not need to gather five years of actual meteorological data to demonstrate compliance. The screening approach is adequate if the results are definitive and a project’s emissions are without question below the NAAQS. However, if the screening results are close to the NAAQS limits (as was the case with three of the six modeled compressor stations for the 1-hour NO<sub>2</sub> NAAQS), *and* if any of the assumptions regarding the source data are significantly in error *or* the assumed background level is chosen inappropriately, then the results of the screening approach may not accurately reflect the NAAQS attainment status for the modeled sources.

Background levels are supposed to represent the contributions from all other emissions sources and the regional background for the NAAQS limit. The assumed background level can have a significant effect on the modeled results (e.g., attainment vs. non-attainment), especially if the background levels are not far below the NAAQS (i.e., even a relatively modest-sized additional source would trigger a violation). Examination of the assumptions regarding the selection of background levels for each of the NAAQS standards reveals that there is at least some uncertainty regarding the value for the 1-hour NO<sub>2</sub> NAAQS at the Buckingham and JB Tonkin compressor stations.

According to the Air Quality Model Results for the Project (using the AERMOD screening mode), the 1-hour NO<sub>2</sub> values at the Buckingham, JB Tonkin, and Mockingbird Hill compressor stations (modeled source impact plus assumed background) are greater than 150 ug/m<sup>3</sup>; the 1-hour NO<sub>2</sub> NAAQS standard is 188 ug/m<sup>3</sup>.<sup>71</sup> Because these modeled concentrations are close to the 1-hour NO<sub>2</sub> NAAQS standards, CBF recommends that FERC staff conduct a careful examination of (a) the appropriateness and/or representativeness of the assumed background levels and (b) the assumptions regarding the data used for the MAKEMET "worst-case" screening data. In addition, the AERMOD modeling of the Project should be conducted using actual meteorological data (instead of screening mode) to determine local NO<sub>2</sub> concentration impacts and to demonstrate attainment with the 1-hour NO<sub>2</sub> NAAQS.

#### **IV. CONCLUSION**

As discussed in the foregoing paragraphs, the DEIS prepared by FERC staff provides inadequate information regarding the foreseeable impacts of the ACP and SHP pipeline project on surface waters and air quality and offers an inadequate evaluation of the mitigation measures proposed to address identified impacts. We respectfully urge FERC staff to take these comments into account, require the Project

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<sup>70</sup> DEIS at 4-454.

<sup>71</sup> DEIS at 4-455, 4-457 (Tables 4.11.1-11 and 4.11.1-13).

Nathaniel J. Davis, Sr., Deputy Secretary  
Federal Energy Regulatory Commission  
April 6, 2017  
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developers to supply omitted material and undertake a careful evaluation of impacts and mitigation consistent with the requirements of NEPA, as part of a final EIS and prior to the Commission's making a final determination on the Certificates of Public Convenience and Necessity.

Sincerely,

A handwritten signature in dark ink, appearing to read "Margaret Sanner", with a long horizontal flourish extending to the right.

Margaret L. (Peggy) Sanner

cc: Pamela Faggert, Chief Environmental Officer & Sr. VP-Sustainability,  
Dominion Resources  
Rebecca LePrell, CBF Virginia Executive Director  
Chris Moore, CBF Virginia Senior Regional Ecosystem Scientist  
Joseph Wood, Ph.D., CBF Virginia Staff Scientist  
Ariel Solaski, CBF Staff Litigation Attorney