COMPANIES/ORGANIZATIONS COMMENTS

CO67 – Friends of Wintergreen, Inc.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

COMMENTS OF FRIENDS OF WINTERGREEN, INC.
ON DRAFT ENVIRONMENTAL IMPACT STATEMENT
Docket Nos. CP15-554-000, CP15-554-001

Date: March 24, 2017

Z-1050

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Atlantic Coast Pipeline, LLC Dominion Transmission, Inc.	Docket Nos. CP15-554-000 CP15-554-001

COMMENTS OF FRIENDS OF WINTERGREEN, INC.
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On December 30, 2016, the Federal Energy Regulatory Commission ("FERC" or the "Commission") released the Draft Environmental Impact Statement ("DEIS" or "draft EIS") prepared by its Office of Energy Projects for the Atlantic Coast Pipeline ("ACP") and Supply Header Project ("SHP") (collectively, the "Pipeline" or "Project") that is proposed by Atlantic Coast Pipeline, LLC and Dominion Transmission, Inc. (collectively, the "Project Sponsors"). Friends of Wintergreen, Inc. ("Friends of Wintergreen" or "FOW") hereby submits these comments on the draft EIS. Wintergreen Property Owners Association, Inc. ("WPOA") and Wintergreen Resort agree with this response. WPOA is filing a similar response separately.

I. INTRODUCTION

As explained below, the draft EIS is materially deficient and fails to satisfy the legal standards that are set forth in the National Environmental Policy Act ("NEPA"),[1] the Council on Environmental Quality's ("CEQ") regulations implementing provisions of NEPA,[2] FERC's regulations implementing NEPA,[3] and FERC's Certificate Policy Statement.[4] FERC has failed to provide any reasoned analysis with facts supporting a conclusion that the Project Sponsors'

[1] 42 U.S.C. § 4332 *et seq.*
[2] 40 C.F.R. pts. 1500-1508.
[3] 18 C.F.R. pt. 380.
[4] *Certification of New Interstate Gas Pipeline Facilities*, Statement of Policy, 88 FERC ¶ 61,227 (1999). ("*Certificate Policy Statement*"); *clarified* 90 FERC ¶ 61,128 (2000); *further clarified* 92 FERC ¶ 61,094 (2000).

proposed route is superior to the alternate routes that Friends of Wintergreen has proposed. Accordingly, the draft EIS is not the product of reasoned decisionmaking, and, to the extent these deficiencies in the draft EIS are carried through into the Final EIS, the Commission's approval of the Final EIS would be arbitrary, capricious, and subject to remand.[5]

The Commission's Certificate Policy Statement encourages applicants to minimize adverse impacts on landowners and surrounding communities and states that projects will not be found in the public interest if unmitigated adverse impacts, including those on landowners and surrounding communities, exceed the benefits provided by the project.[6] The Commission has a statutory responsibility to ensure that all reasonable alternative routes be sufficiently analyzed, evaluated and compared to the route proposed by an applicant in an effort to minimize or avoid adverse environmental impacts. Under NEPA, FERC has a mandate to study, develop and describe appropriate alternatives to the proposed route,[7] and to include in its EIS a detailed statement regarding alternatives to the proposed route.[8] NEPA regulations describe the requirement to look at alternatives as "the heart of the environmental impact statement"[9] and require FERC to produce an EIS that rigorously explores and objectively evaluates all reasonable alternatives so that FERC can define the issues and provide a clear basis for choice among

[5] *Delaware Riverkeeper Network v. FERC*, 753 F.3d 1304, 1312-13 (D.C. Cir. 2014) (Judicial review of agency actions under NEPA is available "to ensure that the agency has adequately considered and disclosed the environmental impact of its actions and that its decision is not arbitrary or capricious.").

[6] Certificate Policy Statement at 61,745. *See* also *Kleppe v. Sierra Club*, 427 U.S. 390, 410, n. 21 (1976); *Natural Resources Defense Council v. U.S. Forest Service*, 421 F.3d 797, 813 (9th Cir. 2005); *Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1122-23 (9th Cir. 2002) *quoting Oregon Environmental Council v. Kunzman,* 614 F.Supp. 657, 659-60 (D. Or.1985) (alternatives that must be considered under NEPA are those that would avoid or minimize adverse environmental effects).

[7] 42 U.S.C. § 4332(E) (2012); *see American Gas Ass'n v. FERC*, 593 F.3d 14, at 19 (reasoned decisionmaking requires FERC to consider alternatives raised by parties); *Midcoast Interstate Transmission, Inc. v. FERC*, 198 F.3d 960, 967 (D.C. Cir. 2000) (same).

[8] 42 U.S.C. § 4332(C)(iii) (2012).

[9] 40 C.F.R. § 1502.14 (2016).

options by the decision maker and the public.[10] "Simple, conclusory statements of 'no impact' are not enough to fulfill an agency's duty under NEPA."[11]

The draft EIS completely fails to satisfy the legal standards set forth above, and, in doing so, clearly conveys the sense that FERC is accepting the Project Sponsors' factual assertions at face value and is failing to give proper credence to public comments. The draft EIS does not "develop and describe appropriate alternatives"[12] to the proposed route. The draft EIS contains no "detailed statement on alternatives"[13] to the proposed route. The descriptions of the alternate routes are cursory. The draft EIS does not rigorously explore and objectively evaluate all reasonable alternatives. As a result, the draft EIS fails to sharply define the issues and provide a clear basis for choice among options by the decision maker and the public. Rather, the draft EIS rejects detailed, thoughtful analysis of alternate routes by Friends of Wintergreen and other public commenters and, in doing so, provides only conclusory statements that cite no supporting facts.

Indeed, the draft EIS states that the Project Sponsor's proposed route will be approved by FERC even if inferior to alternate routes, some of which involve minor modifications to the proposed route for only a few miles. The DEIS explicitly states that the Commission will reject any modification to the proposed route unless the public can prove "a significant environmental advantage" over the proposed route.[14] It appears FERC may reject proposals that minimize adverse environmental impacts in a cost-effective manner, simply because the environmental advantages are not considered "significant" enough. The DEIS cites no legal authority for this position and does not explain what a "significant" environmental advantage entails. Such an

[10] *Id.*
[11] *Foundation on Econ. Trends v. Heckler*, 756 F.2d 143, 154 (D.C. Cir. 1985).
[12] Required pursuant to 42 U.S.C. § 4332(E).
[13] Required pursuant to 42 U.S.C. § 4332(C)(iii).
[14] DEIS at Section 3-1.

approach runs against NEPA's regulatory requirement to assess reasonable alternatives that will "avoid or minimize" adverse environmental effects.[15] As a result, the environmental advantages provided by the alternative routes FOW proposed were not appropriately considered by the Commission.

Project Sponsors' latest proposed route remains deficient because it continues to cause significant adverse environmental, safety and economic impacts in the Wintergreen area. Moreover, the Project Sponsors have not yet performed a *bona fide* evaluation of alternatives that would avoid these impacts, as requested by the Office of Energy Projects ("OEP") in its data requests. Specifically, Project Sponsors have steadfastly avoided an evaluation of the specific route alternatives and deviations proposed by FOW. As discussed in more detail below, any of the route alternatives proposed by FOW would avoid the substantial adverse impacts the Project would have on the Wintergreen area and all of these alternatives are environmentally preferable to Project Sponsors' proposed route.

In light of Dominion's conclusory assertions with respect to FOW's proposed alternate routes supported by expert analyses and the deficient DEIS resulting from reliance on such conclusory assertions, FOW reiterates its request that FERC schedule a technical meeting where FERC's technical experts can participate and directly evaluate FOW's proposed alternate routes and Project Sponsors' objections thereto. Such a face-to-face meeting is specifically permitted by FERC's rules.[16] Alternatively, FERC could schedule a public technical conference in the same manner as it does for technical tariff issues.

[15] 40 C.F.R. § 1500.2(e) (2016).

[16] *See* 18 C.F.R. § 385.2201(e)(vi)(A) (exempting off-the-record communications that relate to the preparation of an environmental impact statement if such communications occur prior to the issuance of the final environmental impact statement from *ex-parte* communication rules).

II. COMMUNICATIONS AND CORRESPONDENCE

Communications regarding this matter should be addressed to the following persons, who also should be designated for service on the Commission's official service list for this proceeding:

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III. BACKGROUND

A. Overview of Friends of Wintergreen Participation in the Certificate Proceedings

Friends of Wintergreen has been an active participant in the FERC dockets relating to the consideration of the Project. As detailed below, FOW has submitted detailed comments, including comments by letter, on six occasions. These comments, including attachments, consist of over 400 pages of detailed analysis, tables comparing the environmental advantages of several alternate routes over the Project Sponsors' proposed route, and maps that show the alternate routes in detail, including key characteristics such as steepness of terrain, Virginia protected areas, and the geographic location of roads and other key features.

To assist in a technical evaluation of Project Sponsors' proposals and other environmentally preferred alternatives, FOW retained Integral Consulting Inc. ("Integral"), a national environmental consulting firm, and Tide Water Integrity Services, LLC ("Tide Water"), an engineering consulting firm led by Bryan Melan, P.E., who is an engineer with thirty-nine years of experience in pipeline construction. Integral and Tide Water have provided technical expertise on environmental impacts, constructability, suitability and related factors. Their expert

analysis, including their reports and affidavits, has been submitted to FERC, and FOW's alternate routes were developed with specific input from these experts.

As indicated above, Friends of Wintergreen has supported the Project and has only sought to modify the path of the proposed route to minimize significant adverse environmental and other impacts. Friends of Wintergreen is deeply disappointed that **none** of its proposed alternate routes have been given serious consideration and that its two preferred alternate routes have been rejected by FERC in a conclusory fashion, with no supporting facts and only **three** sentences of "analysis" with respect to the 664 South Route, and **six** sentences with respect to the Lyndhurst to Farmville Route. FOW submits that it is arbitrary and capricious for FERC to reject alternate routes that minimize impacts without adequate consideration and to fails to require Project Sponsors to develop even minor route variations that would resolve the substantial environmental and other impacts of the proposed route.

B. Friends of Wintergreen's FERC Filings

The following overview briefly summarizes the six major pleadings filed with the Commission by Friends of Wintergreen in the Project certificate proceedings between October 2015 and November 2016. The overview is followed by a more detailed summary of each of these pleadings.

FOW's October 23, 2015 Motion to Intervene and Protest identified adverse and unnecessary economic, safety and environmental impacts of Project Sponsors' proposed route. FOW's December 29, 2015 Motion for Leave to Answer and Answer specifically identified three alternative routes that would minimize or avoid adverse impacts. FOW's May 13, 2016 Comments on Proposed and Alternative Routes provided supplemental information regarding FOW's three alternatives, added a fourth alternative, and sought answers to regarding impacts on Wintergreen.

FOW's August 26, 2016 Letter Regarding Alternative Routes described Project Sponsors' inadequate responses and FOW's technical experts' concerns, and sought a meeting between the parties' technical representatives. FOW's September 12, 2016 Comments on the Spruce Creek Route Variation demonstrated that this Commission Staff alternative presents significant adverse environmental, safety and economic impacts and is inferior to FOW's 664 South Route. FOW's November 22, 2016 Letter Requesting Site-Specific Analysis of High-Hazard Portion of the Route sought the same analysis of high-hazard WPOA land that the Forest Service sought with respect to high-hazard Forest Service land, but neither FERC nor Project Sponsors have addressed this issue.

1. FOW's October 23, 2015 Motion to Intervene and Protest Identified Adverse and Unnecessary Economic, Safety and Environmental Impacts of Project Sponsors' Proposed Routes

On October 23, 2015, Friends of Wintergreen moved to intervene and protested the Project Sponsors' application for a certificate of public convenience and necessity authorizing the construction of facilities along the proposed route. FOW stated that it was not opposed to the Project generally. FOW demonstrated, however, that the proposed route would cause serious adverse and unnecessary economic, safety and environmental impacts. FOW explained that all of these adverse impacts could be avoided without reducing the benefits of the Project if the proposed route were slightly altered.

As detailed by FOW, Project Sponsors' proposed route would create the following serious economic and environmental impacts, safety risks, and disturbance of cultural resources and historical properties in the Wintergreen area that Friends of Wintergreen and other Intervenors have identified:

- Prevent the development of two major projects at Wintergreen Resort and Spruce Creek Spa and Market that are scheduled to bring $75 million in initial investments, at least 250 full-time jobs, and $23 million to $32 million in annual revenue to Nelson County, Virginia.

- Decrease economic opportunities for the largest employer in Nelson County, Wintergreen Resort, with a projected 20% drop in annual revenue, and disrupt the burgeoning tourist industry in the Route 151 corridor. Project Sponsors have recently indicated that they will use Wintergreen Drive, Fortunes Ridge Drive and Fortune's Point Lane, all of which are private roads at Wintergreen, as "permanent access roads" for the massive construction work involved in the Project, so the disruption at the Resort will be substantially greater than previously believed and the drop in annual revenue likely will exceed 20%.

- Create a host of negative environmental consequences, including unnecessarily impacting conservation lands, wetlands, source water protection areas, and other natural resources.

- Pass directly across the sole entrance/exit to Wintergreen Resort. During peak vacation periods such as summer and winter holidays, Wintergreen Resort routinely hosts more than 10,000 residents and guests. Because there is only one entry and exit road for Wintergreen Resort and the Wintergreen residential community, this creates an unnecessary and potentially catastrophic safety risk if an explosion or gas leak occurs.

- Disturb numerous cultural resources, historic properties, nature trails, waterbodies and the Spruce Creek Tributary Conservation Site.[17] This area, which includes Coleman Mills, has been designated by Preservation Virginia as one of Virginia's Most Endangered Historical Places.[18]

- Adversely impact approximately 40 properties in the 400-acre Horizon Village eco-village, including wetlands and other very environmentally sensitive areas in and around the Village.[19]

Since the October 15, 2015 filing, FOW has made five additional filings with FERC that contain detailed analysis of alternate routes that clearly provide "a significant environmental advantage" over the proposed route.

2. FOW's December 29, 2015 Motion for Leave to Answer and Answer Specifically Identified Three Alternative Routes that Would Minimize or Avoid Adverse Impacts

On December 4, 2015, presumably in light of the serious concerns with the Proposed Route expressed by FOW and others, the Office of Energy Projects directed Dominion to evaluate three alternative routes that would avoid these adverse environmental and economic impacts. Specifically, in Data Requests 156, 157 and 158, OEP directed Dominion to evaluate three alternative routes for the Pipeline in an approximate 15-mile length of the Blue Ridge Parkway ("BRP") beginning at Rockfish Gap/ Interstate 64, proceeding to the Reeds Gap area (where the Proposed Route crosses the BRP), and ending at Love Gap and proceeding to Route 56. OEP's directive that Dominion evaluate these routes was intended, at least in part, to explore route alternatives or variations that would avoid the adverse impacts on the Wintergreen Resort

[17] *See* http://www.rockfishvalley.org/blog, and in particular: "Atlantic Coast Pipeline route destroys RVF resources," http://www.rockfishvalley.org/blog/acp-negative-impacts.
[18] *See* http://preservationvirginia.org/pressroom/release/2016.
[19] *See* Attachments 1-3 hereto.

and nearby area. For example, in Data Request 156, OEP requested that Dominion evaluate an alternate route that "avoids or minimizes impacts on cultural and historic properties, nature trails, waterbodies, the Spruce Creek Tributary Conservation Site, and planned developments (i.e., Wintergreen Resort Expansion and Spruce Creek Resort)."

On December 29, 2015, Friends of Wintergreen filed its Motion for Leave to Answer and Answer ("Answer") that identified three specific alternative routes. Each of these alternatives entailed minor route deviations that were consistent with the objective of data requests 156, 157 and 158 from the Commission's Office of Energy Projects ("OEP"). OEP's data request sought to identify and evaluate alternative routes that would avoid or minimize impacts on affected resources and communities, including Wintergreen.

Project Sponsors' response to OEP data requests 156, 157 and 158 identified several alternate routes. However, Project Sponsors refused to identify ***any*** alternate route, including minor route variations, that would eliminate or even reduce the damage to the Wintergreen area. Each of Project Sponsors' alternate routes was unworkable from both a legal and engineering perspective.

FOW's Answer was intended to share with Project Sponsors and the Commission the alternate routes identified by FOW's environmental consultants, as contemplated by OEP's data requests. Each of the alternatives presented by FOW is both technically feasible and less environmentally and economically damaging than the Project Sponsors' proposed route and alternatives. FOW described its own alternative routes specifically by providing detailed maps illustrating their precise path, and explained why these alternatives would minimize or avoid adverse impacts on the environment, Wintergreen Resort and the surrounding area.

Consequently, FOW requested that both Project Sponsors and FERC's staff seriously consider FOW's specific alternate routes.

3. FOW's May 13, 2016 Comments on Proposed and Alternative Routes Provided Supplemental Information Regarding FOW's Three Alternatives, Added a Fourth Alternative, and Sought Answers to Regarding Impacts on Wintergreen

On May 13, 2016, Friends of Wintergreen filed its Comments on Proposed and Alternative Routes ("Alternative Route Comments"). This filing provided thirty-three pages of supplemental information on the three alternative routes that FOW proposed in its December 29, 2015 Answer. Additionally, FOW included a fourth alternate route that was in part based on, but superior to, the amended pipeline route proposed by Project Sponsors in its March 1, 2016 amended certificate application.

The Alternative Route Comments provided detailed analysis as to why the four alternate routes that FOW proposed were superior to the Project Sponsors' proposed route and alternatives. In these comments, FOW requested FERC to expressly direct Project Sponsors to fully evaluate each of FOW's four specific route alternatives and either adopt one of these alternatives or explain in detail why none of these alternatives should be adopted. FOW noted that it was open to consideration of other route alternatives that Project Sponsors may propose, to the extent these would eliminate the serious damage and safety issues identified in FOW's filings associated with Project Sponsors' proposed route.

The Alternative Route Comments also included eleven pages of Preliminary Questions Regarding the Construction Impact on Wintergreen and Adjacent Properties.[20] Project Sponsors never responded to these questions. Answers to these questions are essential to a full, objective comparison of the proposed route against the two alternate routes for which FOW continues to

[20] Alternative Route Comments, at Att. H.

advocate. These are: (i) the Rockfish Gap/Dooms Bremo Route (or, per the DEIS, the Lyndhurst to Farmville Route), and (ii) the 664 South Route.

Additionally, FOW's Alternative Route Comments included a letter to FERC from the Horizons Village Property Owners Association. The Horizon letter explained how the Project Sponsors had provided erroneous information to the Commission, misrepresented the area of the Spruce Creek Tributary Conservation Site in Nelson County, and incorrectly stated that its route adjustments in Horizons Village avoided this conservation site.

4. FOW's August 26, 2016 Letter Regarding Alternative Routes Described Project Sponsors' Inadequate Responses, FOW's Technical Experts Concerns, and Sought a Meeting Between the Parties' Technical Representatives

On August 26, 2016, Friends of Wintergreen filed a letter with FERC in which it reviewed the detailed analysis FOW had provided with respect to alternate routes that were superior to the proposed route. The letter referred to Project Sponsors' short, wholly inadequate response to FOW's alternate routes that Project Sponsors had informally provided to Senator Tim Kaine's office on June 20, 2016. In that response, Project Sponsors stated that they would contact FOW to begin technical discussions regarding FOW's four alternate routes and Project Sponsors' proposed route. Project Sponsors never contacted FOW.

As a result, FOW indicated in its August 26 letter that Tide Water, FOW'S pipeline engineering expert, and Integral, its environmental consultant, had evaluated Project Sponsors' June 20, 2016 response and concluded that:

a) FOW's technical team disagreed with most of Project Sponsors' statements and conclusions. FOW's point-by-point response to Project Sponsors' June 20, 2016 response was included as Attachment 5 to FOW's August 26 letter.

b) Accordingly, FOW's engineers still considered three of FOW's four alternate routes to be demonstrably superior to the proposed route.

Most important, FOW stated that it was essential for FERC to expressly direct the Project Sponsors to fully evaluate each of the specific route alternatives or deviations described by FOW in its comments, and either adopt one of these alternatives or explain in detail why none of these alternatives should be adopted. FOW noted that it was open to other specific route alternatives that Project Sponsors may propose, to the extent these alternatives eliminate the serious economic and environmental damage and safety issues identified in FOW's filings.

In light of Project Sponsors' conclusory assertions and FOW's expert analyses that disagree with Project Sponsors' conclusions, FOW submitted that a face-to-face meeting between the technical experts of Project Sponsors, FOW and FERC Staff's third-party consultant was necessary to resolve these technical issues in a manner that comports with the legal requirements of NEPA. Consequently, FOW requested that FERC schedule a meeting in which FERC's technical experts could participate and directly evaluate FOW's proposed alternate routes and Project Sponsors' objections thereto.

5. FOW's September 12, 2016 Comments on the Spruce Creek Route Variation Demonstrated that this Alternative Presents Significant Adverse Environmental, Safety and Economic Impacts and is Inferior to FOW's 664 South Route

On September 12, 2016, FOW filed its comments on the Project Sponsors' Spruce Creek Route Variation that the OEP developed ("Spruce Creek Comments"). FOW noted that, on December 4, 2015, the Office of Energy Projects directed Project Sponsors to evaluate several alternative routes that would avoid substantial adverse environmental, safety and economic impacts in communities in the Rockfish Valley where the Wintergreen Resort, the planned Spruce Creek Resort, and surrounding communities are located. Despite OEP's Data Request

156 requesting Project Sponsors to evaluate a route variation from approximately milepost 159 to milepost 165 that would minimize impacts in the entire Rockfish Valley, the Spruce Creek Route failed to address any of the serious environmental, safety and economic issues in the upper part of the Rockfish Valley, and specifically the impacts to Wintergreen property owners and Wintergreen Resort. In its Spruce Creek Comments, FOW stated that, while the Spruce Creek Route may be superior to the comparable section of the Project Sponsors' original proposed route, the Spruce Creek Route did not address most of the adverse impacts that the proposed route would have in the Rockfish Valley. As a result, Project Sponsors had failed to respond to Data Request 156 in a significantly meaningful way.

The Spruce Creek Comments further noted that several FOW filings addressed an alternate route – the 664 South Route – that would eliminate the serious adverse impacts in both the upper and lower parts of Rockfish Valley. As explained in FOW's earlier comments, the proposed 664 South Route alternative shifts the exit point for the Project from directly across the entrance to the Wintergreen Resort to a minimum of 1,700 feet south of Route 664, and then follows a path south of Route 664 until the path crosses Route 151. From there, the route returns to the proposed route at approximately Milepost 165.

Among the number of advantages discussed in FOW's prior comments, the 664 South Route avoids the 2,100 foot path from the entrance to the Wintergreen Resort and the segment continuing up the extreme slope of Piney Mountain. At a minimum, adopting this minor route deviation to move the pipeline 1,700 feet from the Wintergreen entrance would mitigate the potential for a catastrophic event with horrific consequences to residents and property at the Wintergreen Resort if the Project exploded at or near the Wintergreen entrance or on Piney Mountain. FOW noted that a more detailed comparison of the impacts of the 664 South Route in

comparison to the proposed route was provided in its earlier comments and again attached those comments for the OEP's convenience.

FOW stated that pipeline mileage required for the 664 South Route is similar to the pipeline mileage required by Project Sponsors' proposed route with the Spruce Creek Route variation. Both route variations utilize pasture and agricultural lands to a large extent. The major difference between the two route variations, however, is that by deviating from the proposed route approximately two miles west of Spruce Creek, the 664 South Route avoids the serious safety risks and economic harm caused by the proposed route's crossing of the only entrance and exit to the Wintergreen Resort. This entrance and exist provides the only ingress and egress for Wintergreen residents and guests that often number more than 10,000.

As a result, FOW urged FERC to require the Project Sponsors to provide a full evaluation of the 664 South Route. FOW also renewed its request that FERC schedule a face-to–face meeting among the technical experts of Project Sponsors, FOW and the Commission Staff's third party consultant to review all the alternate routes proposed by FOW, including the 664 South Route, and to address any technical and other issues relating to these alternate routes. Once again, FERC never responded to FOW's request, but instead rejected the 664 South Route in the draft EIS in a summary fashion that is completely devoid of facts.

6. FOW's November 22, 2016 Letter Requesting Site-Specific Analysis of High-Hazard Portion of the Route Sought the Same Analysis of High-Hazard WPOA Land that the Forest Service Sought with Respect to High-Hazard Forest Service Land but Neither FERC nor Project Sponsors Has Addressed this Issue

On November 22, 2016, Friends of Wintergreen submitted a letter requesting a site-specific analysis of the high-hazard portion of the Project route on Piney Mountain over Wintergreen Property Owners Association ("WPOA") land in Wintergreen ("Request"). See

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Attachment 6. The Request noted that, by letter dated October 24, 2016, the United States Forest Service ("Forest Service") informed FERC that it had submitted an information request to Project Sponsors to further clarify the likelihood that the Project could be constructed through the George Washington and Monongahela National Forests "without undue risk of resource damage."[21] The Forest Service further required Project Sponsors to "develop site-specific stabilization designs for selected areas of challenging terrain . . . that appear to present a high risk for slope failure, slippage, and erosion/sedimentation."[22]

In the Request, FOW sought that FERC staff require Project Sponsors to perform the same analysis with respect to the portion of the proposed route of the Project that consists of and includes a 2,100-foot clear-cut path on private land from the entrance to Wintergreen Resort up the extreme slope of Piney Mountain on WPOA land. Friends of Wintergreen submitted that the risks associated with this portion of the proposed route equaled or exceeded the risks associated with the sites identified by the Forest Service because:

a) The steepness of the slope on Piney Mountain – 66%, 69%, 78% and 85% in several locations – exceeded the "very steep to extremely steep (30 degrees [58%]) short slope" in GWNF Site 5 and, overall, equaled or exceeded the steepness of the slopes that were encountered in all or portions of 9 of the 10 sites identified by the Forest Service.

b) The Piney Mountain area and adjoining areas in Nelson County have a history of extreme weather events. For example, in 1969 Hurricane Camille dropped up to thirty-one inches of rain in Nelson County, predominantly within a three-to-five hour period. This resulted in catastrophic flooding and mountain slope failures. In

[21] Attachment 6 at p. 1.
[22] *Id.*

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all, 153 people were killed, 8,931 people were injured, 5,662 homes were destroyed, and another 13,915 homes experienced major damage. The risk associated with the path of the Project on Piney Mountain is magnified by the fact that Piney Mountain is in a much more populated area than the Forest Service lands. If a landslide occurred on the side of Piney Mountain, the boulders and other debris would be swept into the South Fork of the Rockfish River (a designated Virginia Scenic River) and across Beech Grove Road (State Route 664, which is a designated Virginia Scenic Byway) that carries as many as 10,000 residents and guests to and from the entrance to Wintergreen Resort and is a major connector between Augusta County and Nelson County.

While the FOW's Request raised very serious safety and environmental issues, FERC never responded to it, nor did Project Sponsors. The draft EIS fails to address this specific issue.

IV. ANALYSIS

A. The Draft EIS Assessment of the 664 South Route is Based On Inaccurate Facts and Contains No Reasoned Analysis Supporting a Conclusion that the Project Sponsors' Proposed Route is Superior

The DEIS description of the attributes and advantages of the 664 South Route [23] is inaccurate and is completely devoid of facts to support its rejection. The following are examples of the inaccurate assessment of the 664 South Route in the DEIS with respect to safety and environmental issues.

CO67-1

1. The DEIS Provides no Explanation for the Commission's Rejection of FOW's Concerns Regarding Safety Issues Stemming from Explosion and Fire

[23] This alternative route shifts the exit point for the Project HDD bore from directly across the entrance to Wintergreen Resort to a minimum of 1,700 feet south of Route 664, and then follows a path south of Route 664 until the path crosses Route 151. From there, the route returns to the Project Sponsors' proposed route at approximately Milepost 165.

CO67-1 Comment noted.

CO67-1 (cont'd)

DEIS Statement: "The distance of the alternative HDD entry workspace from the Wintergreen gate would increase by 1,400 feet. [W]e do not believe that this change represents a significant safety advantage."[24]

FOW Response: The Commission provides no reasoned explanation for its conclusion that increasing the distance between the Pipeline and the residents of Wintergreen would not provide a "significant" safety advantage. The distance from the Wintergreen gate would increase by 1,700 feet or more, which by itself is a significant safety advantage, because the blast radius for a pipeline explosion at this location is 1,100 feet. If the proposed route is adopted, such an explosion would destroy the entrance and exit to the Wintergreen Police Department building, the back-up 911 facility for Nelson County, and the WPOA headquarters killing everyone present. The explosion would create a crater substantially greater than the crater 86 feet long, 46 feet wide and 20 feet deep that resulted from the explosion of a much smaller 30 inch pipeline in New Mexico in 2000. It would also melt at least one-half mile (over 2,600 feet) of the only paved road that provides access to Wintergreen, Route 664/Beech Grove Road, and the same length of the only road that provides access past the entrance to Wintergreen, Wintergreen Drive. Between the massive crater and the melted pavement for over 2,600 feet of Route 664, it would be impossible for fire and rescue crews from outside Wintergreen to join in the battle to fight the wall of flame through the heavily forested area up the side of the mountain. That impossible job would fall solely on the shoulders of the three personnel who regularly are present in the Wintergreen Fire and Rescue Building further up the mountain.

The flames would race up the side of the mountains, which form a "box canyon." Box canyons are recognized for topography that can dramatically accelerate the spread of fire. The

[24] DEIS at p. 3-35.

CO67-1 (cont'd)

mountains also have severe wind updrafts. Wintergreen is especially susceptible to high winds, with monthly peak sustained winds ranging between 30-58 mph during the year and 52-58 mph during the winter months of January through April.[25] A private weather station on Black Rock Circle has recorded even higher wind peaks. In 2015, this weather station recorded one wind peak over 100 mph, one wind peak over 90 mph, one wind peak over 80 mph, numerous wind peaks in the range of 40-60 mph, and the great majority of wind peaks exceeding 20 mph. In 2016, the same weather station recorded numerous wind peaks in the range of 40-60 mph, with the great majority of wind peaks exceeding 20 mph. The explosion and resulting fire would trap up to 10,000 residents and guests on the mountain, with no means of escape, leading to a catastrophic loss of life.

These safety issues will be the most significant Project impacts affecting Wintergreen if the proposed route is not moved at least 1,700 feet to the south of Route 664. But contrary to the suggestion in the DEIS, this is not an issue just at a single point, the sole entrance and exit to Wintergreen. Rather, it is an issue with respect to the entire 2,100 foot path of the Project from the Wintergreen entrance and up the extremely steep slope of Piney Mountain. The safety impact is even greater on the mountain because the serious slope issues increase the risk of pipeline failure. Moreover, if it proves to be impossible to complete the HDD tunnel under the Blue Ridge Parkway, the second contingency plan that is described on page 3-21 in Section 3.3.4.3 of the draft EIS provides for surface trenching for 2,124 feet from below the Blue Ridge Parkway to the entrance to Wintergreen. This would move an even longer stretch of the Project onto WPOA land and would expose approximately one-half mile of Wintergreen Drive to a potential pipeline explosion. In short, the most significant issue with respect to the current path of the Project is this safety issue, which is discussed in more detail below.

[25] *See, e.g.*, historical data from https://www.Myweather2.com.

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CO67-2

2. The DEIS Wrongly Concludes that the Topography of FOW's Alternative Route Does Not Reduce the Amount of Side Slope and Steep Terrain Construction when Compared to the Project Sponsors' Proposed Route

DEIS Statement: "Based on aerial and topographic data, the alternative does not reduce the amount of side slope and steep terrain construction when compared to the proposed route."

FOW Response: This statement is based on aerial and topographic data, the source nature and significance of which is completely unspecified. Further, it is not possible to ascertain whether the data relied on by the Commission is part of the record. Given that the DEIS does not identify the topographical data FERC is relying on, it is impossible for anyone outside of FERC to challenge the accuracy of such an unidentified data source. As such, the statement that "the alternative does not reduce the amount of side slope and steep terrain construction when compared to the proposed route" is not supported by identified data in the record.

In any case, the statement in the DEIS is factually inaccurate. The steepness of the slope on Piney Mountain – 66%, 69%, 78% and 85% in several locations – exceeds the "very steep to extremely steep" slope as classified by the Forest Service. There is no location on the 664 South Route where the steepness of the slope is even equal to the steepness of the slope on Piney Mountain. This conclusion is based on terrain analysis provided by FOW's pipeline construction engineer with respect to the 664 South Route. That analysis is provided in the "Safety Issues" section beginning on page __ below, and in the "Constructability Issues" section beginning on page __ below.

CO67-3

3. The DEIS Wrongly Concludes that the Visual Impacts from the Project Sponsors' Proposed Route and FOW's Alternative 664 South Route are Similar

DEIS Statement: "Similar visual impacts would occur along the side slopes and ridgelines of the Three Ridges and Horseshoe Mountains as would occur along the proposed

CO67-2 Comment noted.

CO67-3 Comment noted.

CO67-3 (cont'd)

route's crossing of Piney and Bryant Mountains."[26]

FOW Response: This statement is completely inaccurate. The visual impacts along the side slopes and ridgelines of Three Ridges Mountain would be visible only if a person were standing on Three Ridges Mountain, since the first long stretch of the 664 South Route is shielded from the view of Wintergreen properties by several hills that are adjacent to Route 664 on the south side of the road. Three Ridges Mountain is in a wilderness area, and only the occasional hiker or inhabitant of one of a very small number of grandfathered houses would see the 664 South Route. Horseshoe Mountain is sparsely populated as well and the visual impacts there would be small.

By contrast, the visual impacts associated with locating the Project on the proposed route would be substantial. In the DEIS, only the Blue Ridge Overlook in Wintergreen is identified as having a visual impact. This is incorrect. At minimum, the following overlooks and trails in the Wintergreen area will be affected by the proposed route:

1. Three Ridges Overlook
2. Blackrock Park on Blackrock Circle
3. The Plunge Overlook on Blackrock Circle
4. Blue Ridge Overlook on Devils Knob Loop (site used for weddings)
5. Fortune's Ridge Trail
6. Pond Hollow Trail
7. Devils Knob Trail
8. Laurel Ridge Loop
9. Brimstone Trail
10. Trail to The Plunge Overlook
11. Blackrock Trail

[26] DEIS at p. 3-35.

CO67-3 (cont'd)

Moreover, there are a number of condominiums and a total of over 150 single family houses within Wintergreen whose views will be affected by the Project's 125 foot wide clear-cutting of forest. These homes and condominiums are located on the following streets:

1. Blue Ridge Drive
2. Fortunes Ridge
3. Fortune's Point Lane
4. Arrowwood Lane
5. Chestnut Lane
6. Dogwood Road
7. East Elkwood
8. Gumtree Drive
9. Pinnacle Drive/Treeloft Village
10. Brimstone Drive
11. Blackrock Circle
12. Greenstone Drive
13. Pedlar's Edge Drive
14. South Rock Tree Lane
15. Grassy Overlook
16. Devils Knob Loop
17. Beech Drive
18. East Cedar Court
19. Cedar Drive

In addition, the view of Piney Mountain and Three Ridges Mountain from Wintergreen Resort's Stoney Creek Golf Course (especially Tuckahoe #9) would be marred by the clear-cut strip coming off of Fortune's Point and proceeding down to Route 151. These facts demonstrate that the DEIS erroneously concludes that the 664 South Route alternative would merely transfer construction constraints and visual impacts from one location to another.

CO67-4

B. The DEIS Ignores Proof that the 664 South Route Provides Significant Environmental Advantages Over the Project Sponsor's Proposed Route

The DEIS ignores the significant environmental benefits provided by FOW's alternative 664 South Route, as demonstrated in FOW's previous filings. Specifically, with an increase in the length of the pipeline of only 0.9 miles, the 664 South Route accomplishes the objectives set forth by OEP in Data Request 156 better than the Project Sponsors' proposed route, as detailed below:[27]

1. The amount of agricultural and pasture land from Reeds Gap to Route 151 will increase by 0.51 miles by utilizing the 664 South Route. For the segment West of Route 151, the 664 South Route crosses 0.69 miles of agricultural and pasture land, while the Project Sponsors' proposed route crosses almost no such land (only 0.18 miles).

2. The amount of forested land from Reeds Gap to Route 151 will decrease by 0.28 miles by utilizing the 664 South Route. For the West of Route 151 segment, the 664 South Route crosses 4.68 miles of forested land, while the proposed route crosses 4.96 miles of forested land.

3. The number of residences within the DOT-designated safety concern area of 660 feet will be reduced from thirty-three on the proposed route to twenty-two on the West of Route 151 segment of the 664 South Route, which is a substantial improvement. In assessing the risk posed by a natural gas pipeline, Federal regulations provide the criteria that all houses within 660 feet of the pipe centerline are to be considered in evaluating the "class location unit" under minimum Federal Safety Standards.[28] The same criteria are also provided in regulations that define "High Consequence Areas."[29] FOW has, therefore, used this objective standard in evaluating the number of houses on the proposed route and the 664 South Route that are located in the risk corridor. Project Sponsors' standard of whether a house is within 50 feet or 125 feet of the pipe centerline has no support in the Federal Safety regulations. Project Sponsors' use of this inferior standard does, however, allow it to inaccurately suggest that there is no safety impact at all on houses on the proposed route.

4. The proposed route is within 660 feet of one property that is listed on the National Register of Historic Places, while the 664 South Route avoids all National Register of Historic Places properties.

[27] *See* Table 2 on Attachment 10 to FOW's May 13, 2016 filing.
[28] 49 C.F.R. pt. 192.5.
[29] 49 C.F.R. pt. 192.903.

CO67-4 Comment noted.

CO67-4 (cont'd)

5. The 664 South Route crosses four other state or local roads, while the Project Sponsors' proposed route crosses seven such roads.

6. The 664 South Route crosses 0.07 mile of Protected Private Conservation Lands, while the Project Sponsors' proposed route crosses 0.12 miles of such land.

7. The 664 South Route crosses no shallow bedrock, while the proposed route crosses 0.23 miles of shallow bedrock.

CO67-5

C. The Draft EIS Relies on Inaccurate Data to Compare the Lyndhurst to Farmville Route and the Project Sponsors' Proposed Route, and it Contains no Reasoned Analysis with Supporting Facts as to Why the Proposed Route is Superior

In Section 3.3.7.2 of the DEIS, FERC describes the Lyndhurst to Farmville Alternative as an additional alternative that would utilize the Interstate 64 and Rockfish Gap corridor to avoid the Wintergreen area (see figure 3.3.7-1). This Lyndhurst to Farmville Alternative deviates from the proposed pipeline near AP-1 MP 148 and heads northeast through the city of Lyndhurst to the Interstate 64 corridor. The route then turns west and follows the Interstate 64 corridor and an existing railroad right-of-way until it intersects with the Dooms/Bremo electric transmission line near Yancey Mills. The alternative then travels about 32 miles along the transmission corridor to Weber City and heads south along the electric transmission corridor to the intersection of the proposed pipeline at AP-1 MP 215.0 north of Farmville." At the outset, FOW notes that the DEIS reference to "Weber City" as part of this alternative route is inexplicable. Weber City, Virginia is in far southwestern Virginia, close to the Tennessee border. It is well over 100 miles away from the Lyndhurst to Farmville alternative. This oversight illustrates that FERC has performed a perfunctory and error-ridden analysis of alternate routes, consist with its treatment of collocation and construction issues related to the Lyndhurst to Farmville alternative.

CO67-5 Comment noted.

CO67-6

1. The DEIS Wrongly Concludes that the Improvement in Collocation Provided by the Lyndhurst to Farmville Route is Not a Significant Environmental Advantage

DEIS Statement: "The Lyndhurst to Farmville Alternative would substantially increase the amount of collocation with existing road and utility rights-of-way. Although the alternative would increase collocation with existing road and utility rights-of-way, we find that the additional 7.7 miles of length and construction constraints would not provide a significant environmental advantage."[30]

FOW Response: This is a remarkable statement that dismisses the importance given in FERC regulations to collocation with existing rights of way in order to minimize impacts on sensitive resources,[31] and it illustrates FERC's failure to require Project Sponsors to maximize, or even to reasonably utilize, collocation. The Lyndhurst to Farmville Route increases collocation significantly by locating adjacent to railroads, highways and electric transmission lines. Most notably, the great majority of the collocation occurs on the Dooms/Bremo electric transmission lines, which are two large arrays of parallel electric transmission lines. The lines and the rights-of-way are owned by Project Sponsor affiliate Dominion Virginia Power.

The approximate width of the cleared electric transmission line right-of-way is 200 feet in the east-west direction and 100-150 feet in the north-south direction. The Project could be collocated within or adjacent to this right-of-way, which would require only a small expansion to this existing right-of-way to accommodate the Project. The Lyndhurst to Farmville Route option for the AP-1 segment of the Project would result in approximately 75.27 pipeline miles of collocation with rights of way for existing infrastructure. The AP-1 segment is 300 miles long. There are 23.5 miles of collocation on this segment of the proposed route, or a mere 7.8% of the

[30] DEIS at p. 3-30.
[31] 18 C.F.R. 380.15(d)(1).

CO67-6 Comment noted.

CO67-6 (cont'd) AP-1 segment. Adding 75.27 miles of collocation increases the total collocation on the AP-1 segment to 98.77 miles, or 32.9%.

The Commission's Certificate Policy Statement encourages applicants to minimize adverse impacts on landowners and surrounding communities and states that projects will not be found in the public interest if unmitigated adverse impacts, including those on landowners and surrounding communities, exceed the project's benefits.[32] In the comparable portion of the proposed route, the Project appears to have **no** use of existing rights-of-way. The proposed route thus shifts all of the adverse impacts onto landowners and surrounding communities, and Project Sponsors refuse to use the lines and rights-of-way owned by its own affiliate, Dominion Virginia Power. This is unacceptable. The substantial amount of collocation on a Project Sponsor affiliate's own right-of-way – increasing collocation on the AP-1 segment from 7.8% to 32.9%, an increase of 75.27 miles - is a substantial benefit that by itself provides a "significant environmental advantage" over the proposed route and fully supports the adoption of the Lyndhurst to Farmville Route.

CO67-7

2. The DEIS Acknowledges the Significant Environmental Advantage that Results from the Additional 75.27 Miles of Collocation Using the Lyndhurst to Farmville Route but Wrongly Concludes that the Construction Issues Associated with a Rockfish Gap HDD Bore May Be Infeasible

DEIS Statement: "Completion of a HDD or bore under the BRP and ANST at Rockfish Gap is a critical component in determining the viability of alternatives through Rockfish Gap. A consultant for the Friends of Wintergreen concluded that a 500-foot-long HDD could be completed from a starting location west of the railroad tunnel. FERC staff conducted a site visit at Rockfish Gap in 2015 to review potential pipeline installation options. Based on our review, it is apparent that completion of a HDD or bore under the [Blue Ridge Parkway] and ANST at

[32] Certificate Policy Statement at p. 61,745.

CO67-7 Comment noted.

CO67-7 (cont'd)

Rockfish Gap would be constrained by steep topography, structures, roads, bridges, a railroad tunnel, and limited locations for workspace outside of NPS lands and workspace necessary to fabricate the pull-back section of pipe, and ultimately may be infeasible."[33]

"The alternative would need to be modified to avoid construction constraints within Lyndhurst and along the Interstate 64 corridor. As previously stated in section 3.3.7.1, completion of a HDD or bore under the [Blue Ridge Parkway] and ANST at Rockfish Gap is constrained and likely impractical."[34]

FOW Response: The DEIS acknowledges the significant environmental advantage that results from the additional 75.27 miles of collocation using the Lyndhurst to Farmville Route. However, FERC's sole objection is a result of construction issues that FOW's expert has clearly demonstrated are solvable. FERC does not claim that the construction of a short 500-foot HDD tunnel at Rockfish Gap is impossible. Nevertheless, its unsupported conclusions regarding construction issues are the basis for rejecting the Lyndhurst to Farmville Route.

Moreover, FERC fails completely to satisfy its legal obligation to compare construction issues related to the 500-foot HDD tunnel at Rockfish Gap with the construction issues stemming from the 4,639 foot long HDD tunnel under the Blue Ridge Parkway on the comparable section of the Project Sponsors' proposed route. The simplest reading of the DEIS shows that the construction issues on the proposed route are substantially greater. Indeed, the DEIS has numerous references to the challenges associated with the 4,639 foot long HDD tunnel under the Blue Ridge Parkway, but fails to account for these in dismissing the 500-foot HDD tunnel at Rockfish Gap.

[33] DEIS at p. 3-30.
[34] *Id.*

Z-1080

CO67-7 (cont'd)

In the best of circumstances, the DEIS indicates that the Blue Ridge Parkway tunnel will require around-the-clock operations and could take one year or longer.[35] Construction of the 500 foot long tunnel at Rockfish Gap would take substantially less time. Moreover, with such a long tunnel, the DEIS cites a litany of issues that could cause the HDD to fail: "It is possible for HDD operations to fail, primarily due to encountering unexpected geologic conditions during drilling or if the pipe were to become lodged in the hole during pullback operations. Potential causes for abandoning a drill hole include the loss of drill bits or pipe down the hole due to a mechanical break or failure; a prolonged release of drilling mud that cannot be controlled; failure of the HDD pullback where a section of pipe cannot be retracted and has to be abandoned; or an inability to correct a severe curvature of the pilot hole drill path.[36] Possible geologic conditions that could be encountered include karst areas and sinkhole conditions.

On page 2-40, the draft EIS states that Project Sponsors have submitted an entire appendix to discuss the potential: "Atlantic has prepared a *Horizontal Directional Drill Drilling Fluid Monitoring, Operations, and Contingency Plan* (*HDD Plan*) that describes the drilling techniques and other measures that would be implemented to minimize and address potential issues associated with HDD crossings, including the potential for an inadvertent loss of drilling mud (see appendix H)." With this extensive list of potential problems, the draft EIS then devotes Section 3.3.4.3 beginning on page 3-21 to two contingency crossing options: "We acknowledge that there is some inherent risk with the HDD method and unknown factors can cause a HDD to fail, and alluvium at the entry and exit locations could complicate the drilling process. In the event that the proposed HDD fails, Atlantic has identified contingency crossing options that it

[35] *See* DEIS at 2-45.

[36] In the event such an occurrence happens with the proposed projects, reasonable attempts would be made to overcome the obstacles preventing successful completion of the drill. Such measures could include re-drilling the pilot hole in a slightly different location or re-conditioning of the pilot hole.

Z-1081

CO67-7 (cont'd)

would implement to complete the crossing of the BRP and ANST as described below." Furthermore, Project Sponsors would be required to seek approval from the Commission and other applicable agencies prior to abandoning any HDD (or direct pipe) crossing in favor of another construction method.

In contrast to the very significant construction issues that the DEIS catalogues with respect to the 4,639 foot long tunnel on the Project Sponsors' proposed route, the minor construction issues with respect to the 500-foot long tunnel at Rockfish Gap are all solvable, as demonstrated by the detailed analysis prepared by FOW's pipeline construction consultant, Tide Water, which analyzed this component of the Lyndhurst to Farmville Route and concluded that this route segment is feasible and would be environmentally preferable to the Project Sponsors' proposed route. According to Mr. Melan, a 500-foot long horizontal directional drill could be located between 38°01'52.5"N 78°51'33.7"W and 38°01'53"N 78°51'28"W. The latter location is within a triangular shaped vacant property located between the Blue Ridge Parkway and the new Blue Ridge railroad tunnel and would be the location for the drilling equipment and entry point. The exit hole at the former location would be in a currently empty parking lot used for derelict and out-of-use buildings. The entrance hole would be greater than 100 feet west of the nearest tunnel and approximately 300 feet in elevation above it. The elevation of both the entrance and exit of the proposed HDD would be about the same, 1,895 feet. A temporary area the equivalent length of the HDD length is required behind (west) the parking lot to construct the pullback pipe string. That area is currently vacant space and appears to be of adequate length. The 500-foot long tunnel would be substantially shorter than the tunnel Atlantic proposes to drill underneath the Blue Ridge Parkway; which is estimated to be over 4,000 feet

CO67-7 (cont'd)

long." Mr. Melan thus responded to all of the construction issues that are raised in the draft EIS and explained why they are solvable.

One added advantage of the Rockfish Gap drill point is that the risk of karst and sinkholes at this location would be minimized since extensive tunneling and construction have already been performed in this area without encountering these geological formations.

In its December 29, 2015 Answer, FOW described how Tide Water had completed a detailed evaluation of a potential route through Rockfish Gap that avoids the Lyndhurst Source Water Protection Area. Tide Water concluded that this route, referred to as the Rockfish Gap/Dooms Bremo Route, is superior to the proposed route.[37] FOW's consultants analyzed two separate components of this route and concluded that these route segments are constructible and would be environmentally preferable to the proposed route.[38] Tide Water completed a detailed evaluation of the constructability of the Rockfish Gap/Dooms Bremo Route from the point at which this route departs from the proposed route in the Lyndhurst area (milepost 148.1) to the point where this route reaches the Dooms/Bremo electric transmission lines at Exit 107 on Interstate 64. After reviewing a number of factors, including slope steepness, ridgeline crossings, width of available land for construction, availability of railroad rights-of-way, and location of residences and other structures, Tide Water concluded that this section of the Rockfish Gap/Dooms Bremo Route is constructible.[39]

Additionally, FOW's consultant completed a preliminary evaluation of the Rockfish Gap/Dooms Bremo Route on the Dooms/Bremo electric transmission lines from Exit 107 to where the route re-joins the proposed route near Farmville. After reviewing a number of factors,

[37] FOW December 29, 2015 Answer at p. 9.
[38] *Id.*
[39] *See* Attachment 3 to FOW December 29, 2015 Answer for vertical profile from Milepost 148.1 to Exit 107 on I-64, and Attachment 4 to FOW December 29, 2015 Answer for slope map for the same section.

Z-1083

CO67-7 (cont'd)

including terrain, location of residences and other structures (including historic structures), and location of Virginia conservation lands or National Park Service ("NPS") lands, Integral concluded there are no substantial impediments to construction. Integral further concluded that additional impacts to undeveloped lands should be relatively modest as this route is entirely along electric transmission line rights-of-way that have already been cleared.

The DEIS states that the Lyndhurst to Farmville Route alternative would need to be modified to avoid construction constraints within Lyndhurst and along the Interstate 64 corridor.[40] Integral and Tide Water concluded that any such construction issues are solvable. In particular, the reference in the DEIS to the "city of Lyndhurst" illustrates how superficial FERC staff's assessment of this alternate route was.[41] Lyndhurst is not a "city" in any sense. It is a sparsely populated area with houses primarily located right next to the few two-lane roads in the area. Moreover, there is only a small number of houses scattered along the Lyndhurst to Farmville Route, and it is in partially for this reason that FOW utilized this portion of the Lyndhurst area for its proposed Lyndhurst to Farmville Route. With respect to the Interstate 64 corridor, there is no point at which the Lyndhurst to Farmville Route is within the Interstate 64 corridor. After crossing under the Blue Ridge Parkway at Rockfish Gap, the proposed route takes the Project path between Interstate 64 and State Route 250 for several miles, an area that offers an increasingly wide construction corridor. Most important, Tide Water's review specifically included "width of available land for construction" and concluded that the Lyndhurst to Farmville Route is constructible.

Finally, all of the inaccurate description of the purported construction issues in the DEIS could have been avoided if FERC had simply agreed to meet face-to-face with FOW and its

[40] DEIS at p. 3-28.
[41] DEIS at 3-30.

Z-1084

CO67-7 (cont'd)

construction experts. As detailed above, twice in 2016, FOW requested that FERC's staff and its technical experts meet with FOW and the Project Sponsors so that these technical issues could be vetted. FERC declined to meet with FOW despite the fact that there was no legal prohibition. FOW now reiterates its request from its August 2016 filing with FERC that FERC schedule such a meeting.

CO67-8

3. The DEIS Erroneously Rejected the Lyndhurst to Farmville Route Because No Congressional or Presidential Approval is Required

DEIS Statement: "[T]he Congressional and Presidential approval process that would be required to construct the alternative across the ANST was not a significant factor in our decision."[42]

FOW Response: This statement is inexplicable. There is no legal prohibition for the Lyndhurst to Farmville Route to cross under the Blue Ridge Parkway and the Appalachian Trail ("ANST") at Rockfish Gap, so no Congressional or Presidential approval is required. In FOW's October 23, 2015 Protest, FOW indicated that on September 11, 2015, representatives from FOW met with representatives of Project Sponsors to discuss the Project Sponsors' currently proposed route, its adverse effects, and potential route alternatives. Regarding Rockfish Gap, Project Sponsors acknowledged that it was a desirable place to cross the mountains and that it would cure the adverse effects identified by FOW.[43] Project Sponsors also explained that they previously evaluated Rockfish Gap because it was one of the few locations where the Project could cross the Appalachian Trail without an act of Congress. A careful review of detailed maps of this location shows that there is at least a 300 foot wide corridor where the Pipeline could legally cross under the Appalachian Trail, and possibly a corridor as wide as 1,000 feet. A 300 foot wide corridor is more than sufficient to complete the construction activities at this location,

[42] DEIS at p. 3-31.
[43] Protest at 12.

CO67-8 Comment noted.

CO67-8 (cont'd) given that Project Sponsors have stated repeatedly that they need a construction corridor that is no more than 125 feet wide in "non-agricultural uplands."[44]

D. The DEIS Fails to Appropriately Consider the Cumulative Effects of Significant Adverse Environmental, Safety And Economic Impacts In The Wintergreen Area That Will be Caused by Project Sponsors' Proposed Route.

There are significant adverse environmental, safety and economic impacts in the Wintergreen area that will result directly from Project Sponsors' proposed route, but that are not even mentioned or are cursorily summarized in the DEIS analysis. The DEIS discussion of the adverse impacts is fragmented, but these impacts will have a cumulative effect that must be analyzed in the context of consideration of discussion of the alternate routes. These impacts are eliminated or substantially mitigated by the alternate routes, so these routes provide "substantial environmental advantages" as compared to the proposed route. A detailed description of these impacts is provided below.

CO67-9

1. Wintergreen Area Safety Impacts of the Project Sponsors' Proposed Route

In its Protest filed with FERC on October 23, 2015, Friends of Wintergreen identified an extremely serious safety issue that the draft EIS does nothing to resolve.[45] In a section titled "The Adverse Public Safety Consequences of the Current Route," FOW explained that the Resource Report[46] omitted Wintergreen among the list of major population centers, while identifying local communities that are several miles from Wintergreen - Stuart's Draft (population 9,253) and Fisherville (population 7,462) – as major population centers. During peak vacation periods such as summer and the winter holiday, Wintergreen Resort routinely hosts more than 10,000 residents and guests. It is therefore misleading to suggest that the Project, as it passes through Wintergreen, does not impact a major populated area. This error is

[44] DEIS at 2-19
[45] Protest at 10.
[46] Project Sponsors' Resource Report 5 (Socioeconomics) at 5-7.

CO67-9 As described in section 4.12, ACP would be constructed and operated in accordance with the DOT's requirements for safety under 49 CFR 192. As described in section 4.12.1 of the EIS, DOT regulations require that Atlantic and DETI establish and maintain a liaison with appropriate fire, police, and public officials and to coordinate mutual assistance and ensure that these services have the equipment and training necessary to respond to any emergencies related to ACP and SHP. Atlantic and DETI would communicate with emergency responders on an annual basis. Atlantic and DETI would also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a natural gas pipeline emergency and report it to appropriate public officials. In addition, Section 4.12.1 has been revised with additional discussion of Atlantic's coordination with local emergency response providers and the development of its Operational Emergency Response Plans, which would address evacuation requirements in the event of an incident along the pipeline.

CO67-9 (cont'd)

significant because there is only one entry and exit road for the Wintergreen resort and the Wintergreen residential community. The proposed route intersects with this single point of entry, not only passing through a major population area, but also through the only access point for that population area.

Federal regulations require that, where possible, pipelines should be located to avoid population areas.[47] Project Sponsors state in their Resource Report 8 that the proposed route's location in Nelson County satisfies this requirement.[48] This is simply incorrect. Project Sponsors have actually proposed a route that accomplishes the opposite result. The proposed route locates a pipeline at the single entry and exit point for a major population area. This causes an unnecessary safety risk. Safety regulations require pipelines to be located away from population areas to minimize the safety risk to the population in the event of a pipeline accident. The current route would do the opposite. The current route would maximize this safety risk for the Wintergreen Resort and the Wintergreen residential community.

In subsequent filings, Friends of Wintergreen reiterated and expanded on this very serious safety issue. In its Answer filed with FERC on December 29, 2015, FOW stated:

> "[T]he proposed route creates an unacceptable safety risk. During peak vacation periods and the winter holidays and ski season, Wintergreen Resort routinely hosts more than 10,000 residents, guests and visitors at any one time. Since the proposed route will be situated next to the only entry and exit road for Wintergreen Resort and the Wintergreen residential community represented by the Wintergreen Property Owners Association or WPOA, it creates a substantial and unnecessary safety risk given this environment. While natural gas pipelines are safe relative to other modes of energy transport, it is indisputable that incidents and explosions do occur, sometimes with tragic consequences. An explosion at the entrance to Wintergreen would produce a 1,100-foot blast radius that would destroy the Gatehouse at the entrance, the Wintergreen Police facility (which includes the Wintergreen 911 emergency communications center and the only back up 911 emergency communications center for Nelson County), and the headquarters for WPOA. The area at the entrance is heavily forested, and a large

[47] Project Sponsors' Resource Report 8 (Land Use, Recreation and Aesthetics), at 8-29 (Sep. 18, 2015).
[48] *Id.*

CO67-9 (cont'd)

> forest fire would likely trap up to 10,000 persons on the mountain with no ability to exit.
>
> The Virginia Department of Forestry's mountain firefighting training syllabus in discussing the potential for fire at the entrance to Wintergreen. The topology at the Wintergreen entrance is that of a box canyon surrounded on the north, east and west by southern-facing mountainsides, which are described in the syllabus as ideal conditions for the rapid spread of fire. Thus, the fire safety issue at the entrance of Wintergreen presents a unique condition, and a unique risk.[49] The Chief of the Fire and Rescue Service, and others, have submitted separate comments to the FERC docket on this point."[50]

Moreover, a report dated September 15, 2015 by J.W. Garner was filed with FERC by Jay Roberts, the Executive Director of WPOA, under cover of letter dated February 25, 2017.[51] Mr. Garner served as State Forester (*i.e.,* the Agency Director) of the Virginia Department of Forestry for 21 years, and he served the Department for a total of 46 years. His experience unquestionably makes him a leading authority on the risk from forest fires in the Wintergreen area.

Mr. Garner states that he is writing "to express my concerns for public safety along the proposed southern route - specifically in Nelson County at the entrance to the Wintergreen Resort." "During my field time I was on-the-line involved with forest fires, many in the mountainous terrain. Although the size of Virginia fires is not as large (a 1000 acre fire is not a rare event here), the intensity of a given event equals that of the notable western wildland fires."

Mr. Garner notes that the topography of the Wintergreen area results in special challenges when fighting a forest fire: "During the early development of Wintergreen Resort, I participated in planning sessions and publicly expressed my concerns about the potential hazards of forest

[49] *See* Wintergreen Resort and WPOA Motion to Intervene and Protest, at 16-21 (filed Dec. 16, 2015).
[50] FOW Protest, at 16-18 (filed Aug. 26, 2016).
[51] *See* Attachment 7.

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CO67-9 (cont'd) fires and the challenges of protection in such topography. This topography, while wild and beautiful, lends itself to rapidly spreading fire and very limited and difficult access for firefighters and equipment. There have been several "near miss" fires surrounding the Wintergreen mountain. However, other mountain developments in Virginia have not been so fortunate where wildfires resulted in the loss of homes and structures."

CO67-10 Adding to the risks relating to the topography, Mr. Garner indicates that the ultimate risk arises from the fact that Wintergreen Resort has only one entrance and exit: "Compounding the normal challenges of fire control, there is only one steep, winding, two lane road to the resort at the top of the mountain. The resort has over 1000 permanent residents plus an equal number of full time employees on any given day. Special events at the resort increases this number multiple times. One way in and the same way out!" "I am not debating the merits of the pipeline, but specifically the location of this proposed route. Located at the very entrance to a highly populated area with such limited ingress/egress causes me significant concern."

In its December 29, 2015 filing with FERC (Attachment 2), FOW continues: "In its answer, ACP seeks to discount the safety risks by a generic recitation of standard safety measures that are incorporated in all natural gas pipelines ("will be monitored 24/7 through DTI's gas control center, will be regularly monitored by air and foot patrol, as well as inspected by in-line pigging"). But, as the Wintergreen Resort and WPOA pointed out in their Motion to Intervene, the Wintergreen circumstances and geography are unique and more susceptible to a hazard that cannot be addressed by standard practices. OEP has noted the need for ACP to submit a written emergency plan that includes procedures to minimize the hazards in a natural gas pipeline emergency and detail the measures that ACP would include in its

CO67-10 See the response to comment CO67-9.

CO67-10 (cont'd) emergency plan to account for ingress and egress at the Wintergreen Resort specifically in the case of a natural gas pipeline emergency." See OEP Information Request 168 at page 43.

Given the magnitude of this safety issue presented by the proximity of the proposed route to the Wintergreen Resort and in light of the unique characteristics of the resort, FOW and all property owners at Wintergreen are not aware of any plan that can adequately address these risks short of eliminating or mitigating the risk altogether by requiring that Project Sponsors adopt one of the alternate routes or route variations discussed herein.

FOW stated in its Comments on Proposed and Alternative Routes that Project Sponsors' newly proposed route remains deficient because it continues to cause significant adverse environmental, safety and economic impacts in the Wintergreen area.[52] Moreover, Project Sponsors have not performed a bona fide evaluation of alternatives that would avoid these impacts as requested by OEP in its data requests. FOW reiterated that "[t]he proposed route would pass directly across the sole entrance/exit to Wintergreen Resort. During peak vacation periods such as summer and the winter holiday, Wintergreen Resort routinely hosts more than 10,000 residents and guests. Because there is only one entry and exit road for Wintergreen Resort and the Wintergreen residential community, this creates an unnecessary and potentially catastrophic safety risk if an explosion or gas leak occurred."[53]

CO67-11 This safety risk is magnified by the extremely steep slope of Piney Mountain, which Project Sponsors proposed as a 2,100 foot path for the Project from the entrance to Wintergreen up to the top of Piney Mountain at Fortune's Point. All the potential damage to Wintergreen Resort and its residents arises because the proposed route places the Project directly across from the entrance to Wintergreen Resort (at approximately milepost 158.8) and then

[52] FOW, Comments on Proposed and Alternative Routes, at 1 (May 13, 2016).
[53] *Id.* at 3.

CO67-11 Comment noted.

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follows a 2,100-foot path with a minimum 125-foot clear cut up the side of a very steep mountain, Piney Mountain (approximately milepost 159.5), crossing Wintergreen land.[54] FOW elaborated that "[t]his creates significant construction challenges and risks. Based on detailed analysis by Tide Water, utilizing Project Sponsors' Alignment Sheets, of the 2,100 feet of the construction path up the side of Piney Mountain, approximately 1,679 feet is at a slope in excess of 40%. Other sections of this path show a slope of over 50% and as much as 64%. An additional analysis of the slope based on USGS topography shows portions of the slope as steep as 66%, 69%, 78% and 85%.[55] According to Project Sponsors' updated Resource Report 7 with topsoil no deeper than 12 inches, the right of way clearing and grading for the pipeline will remove a significant amount of topsoil during the laying of the pipe.[56] In addition, Resource Report 7 explains that the route up the steep side of Piney Mountain is highly susceptible to water erosion.

As explained by Tidewater, when the above factors are taken into account, the trenching and laying of pipeline up Piney Mountain at very steep grades increases the risk of rock and ground slides.[57] Risks from these slides would be exacerbated by frequent major storm conditions in this section of the Blue Ridge Mountains that is highly susceptible to water erosion. Such risks would continue long after construction was completed. These rock and ground slides would impact the South Fork of the Rockfish River, a tributary of the Rockfish River, which is a Virginia Scenic River. In addition, a rock slide could potentially bury Route 664 and any unfortunate travelers at the time of the slide. In addition, the construction process risks serious water run-off and mountain-side deterioration issues leading to the headwaters of the Rockfish

[54] *Id.* at 17-18.
[55] *Id.* at 21 (citing Attachment 11 thereto, Friends of Wintergreen, Declaration of Bryan Melan, at ¶ 6 (May 13 2016)).
[56] *See* Project Sponsors response to FERC December 4, 2015, December 24, 2015, and January 5, 2016 data requests filed on April 15, 2016; and Project Sponsors' Resource Report 7 (Soils – Updated) (April 15, 2016).
[57] *See* Declaration of Bryan Melan, Attachment 11, Paragraphs 6-7 ("Melan Declaration").

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CO67-11 (cont'd) River, the James River and eventually the Chesapeake Bay. Any affected waterways on the 664 South Route are major tributaries into the James River.[58] See id at Paragraph 7. For all of these reasons, in 18 C.F.R. § 380.15(e)(3), FERC's regulations provide that steep slopes should be avoided where practical.[59]

CO67-12 The very serious safety issues resulting from the fact that there is only one entrance/exit to Wintergreen Resort would be substantially mitigated by the adoption of the 664 South Route. As previously indicated, there frequently are more than 10,000 residents and guests at Wintergreen Resort. The blast radius, or High Consequence Area, for the Project is over 1,100 feet. If there is an explosion of the pipeline on the proposed route directly at the entrance/exit to the Wintergreen Resort, the potential for a catastrophic event as the resulting fire races up the slope is significant. The 664 South Route moves the pipeline 1,700 feet from the entrance/exit to the Wintergreen Resort, which provides a substantially greater buffer if there is an incident. The 664 South Route also moves the pipeline to the south of Route 664, which gives emergency fire and rescue responders substantially better road access, improving their ability to contain a fire before it heads up the slope to the Wintergreen Resort. Project Sponsors' response that it will deal with a crisis response plan at some point in the future is a wholly inadequate approach when dealing with the safety of 3,500 property owners and potentially 10,000 owners, residents and Resort guests at any point in time.

On September 12, 2016, FOW submitted its Comments on the Spruce Creek Route Variation. A portion of the comments noted that the Route Variation failed to resolve the safety issues that FOW had identified in several filings. FOW explained that the proposed 664 South Route alternative shifts the exit point for the ACP from north of Route 664, directly across the

[58] *See* Melan Declaration at ¶ 7.
[59] 18 C.F.R. § 380.15(e)(3).

CO67-12 Comment noted.

CO67-12 (cont'd)

entrance to the Wintergreen Resort, to south of Route 664, and then follows a path south of Route 664 until the path crosses Route 151. From there, the route returns to the proposed route at approximately Milepost 165.[60] Among the number of advantages discussed in FOW's prior comments, the 664 South Route avoids the 2,100 foot path from the entrance to the Wintergreen Resort and continuing up the extreme slope of Piney Mountain. At a minimum, adoption of this minor route deviation to move the pipeline only 1,700 feet from the Wintergreen entrance would mitigate the potential for a catastrophic event with horrific consequences to property owners and residents at the Resort if a fire spreads up the steep slope to the Resort itself. FOW urges OEP to require ACP to provide a full evaluation of the 664 South Route.

On November 22, 2016 (Attachment 6), FOW further filed a letter with FERC in which it reiterated its serious concern with constructability issues on the path of the Pipeline for 2,100 feet up the side of Piney Mountain and related safety issues if the Pipeline failed. FOW noted that had requested that ACP 'further clarify the likelihood that the ACP can be constructed through the George Washington and Monongahela National Forests without undue risk of resource damage,' and 'ACP develop site-specific stabilization designs for selected areas of challenging terrain . . . that appear to present a high risk for slope failure, slippage, and erosion/sedimentation.' Notably, of the 10 sites that the Forest Service selected for analysis by ACP, three sites are wholly or partially on private land." FOW then requested "that the FERC Staff require ACP to perform the same analysis with respect to the portion of the Proposed Route of the Atlantic Coast Pipeline (the "Pipeline") that consists of and includes a 2,100-foot clear-cut path on private land from the entrance to Wintergreen Resort up the extreme slope of Piney Mountain. This land, and thousands of acres surrounding it, is designated forested open space approved and managed by WPOA, a non-profit corporation comprised of the owners of 3,500+ properties at Wintergreen. In its

[60] A map that shows Route 664 South, ACP's proposed route and the Spruce Creek Route is attached hereto.

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previous submissions to FERC, Friends of Wintergreen has identified a number of significant risks associated with the construction of the Pipeline up the very steep slope of Piney Mountain. These risks are very similar to the risks that the Forest Service has identified with respect to the land it oversees, and in many respects these risks are greater due to the fact that Piney Mountain is in a much more populated area."

Since then, Dr. Mervin J. Bartholomew has completed a report titled "The Reed's Gap-Pond Hollow, Debris-Avalanche/Debris-Flow Collection Basin, Nelson County, Virginia." filed with FERC by Jay Roberts, the Executive Director of WPOA, under cover of letter dated February 25, 2017.[61] Dr. Bartholomew has been a geologist for 53 years, including serving as Geologist-in-Charge of the Virginia Tech Office of the Virginia Division of Mineral Resources. Dr. Bartholomew's published maps and report on the geology of the Sherando quadrangle (which includes the Wintergreen area) remain the official document used by Virginia's Department of Mines and Minerals.

Dr. Bartholomew focuses on the Reed's Gap-Pond Hollow area, which is the portion of the Wintergreen area that contains the proposed route of the Pipeline from the Reed's Gap area of the Blue Ridge Parkway down to the entrance to Wintergreen Resort and up the side of Piney Mountain to Fortune's Point.

Dr. Bartholomew concludes that "[b]ecause this location [at Wintergreen Resort] is the only entrance and exit for both security and administrative buildings as well as for the larger community, the current route is inadvisable and the risk of failure is high. I recommend that the pipeline be relocated and not be placed across this collection basin where the geologic factors indicate greater concern for public safety."

[61] *See* Attachment 7.

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CO67-12 (cont'd)

Dr. Bartholomew explains that on a recent visit to the Wintergreen area, he observed that some limited geotechnical work "had been done along a narrow proposed pipeline route across the collection basin. This was near a debris-avalanche chute that crossed VA highway 664 near Reeds Gap. In 1969 . . . I observed that this debris avalanche stopped around 0.5 km down the mountain where the gradient flattened in the catchment basin." He described this as "an area where repeated debris-flows/debris-avalanches are known to have occurred." Hurricane Camille "produced more than 1100 debris avalanches," and "I know that high-rainfall events like Camille will happen again and again!" Yet "major rainfall events do not need a Camille-type storm to trigger landslides. Even moderate rainfall and groundwater movement along faults and shear zones, bedding contacts, foliation planes and joints can trigger landslides as witnessed by the tubing-park slope failure at Wintergreen and the subsequent decision to move the water tank because of it." These geologic hazards are so severe that "[w]hile Wintergreen was in its nascence, I recommended that the Pond Hollow access road not be used as the principal access route to Wintergreen because of the high risk that the Reeds-Gap/Pond-Hollow collection basin possesses from repeated debris-flow/debris-avalanches."

Dr. Bartholomew adds: "My concern was magnified many times over when I recently visited and walked the route of the proposed pipeline and learned of the intention to put a large, high pressure gas pipeline across the funnel of the tracks of many debris-flows/debris-avalanches. Considering the size of many very large boulders in past debris flows and the sheer weight and size of these debris flows, a gas pipeline is not safe a safe structure to install on the surface of the ground nor within surficial debris-flow deposits in this catchment area. The debris-flow/debris-avalanche deposits in the collection basin are relatively shallow and a Camille-type rainfall event

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CO67-12 (cont'd)

centered on this collection basin could literally 'pull the plug' and all of the deposits could be swept down the funnel scouring the base of the granite floor with debris tracks!"

And Dr. Bartholomew notes that while "a tunnel bored within the granite bedrock beneath the surficial colluvial deposits would provide better protection to a pipeline, . . . considerable care must be exercised because SE-dipping lithologic contacts, SE-dipping faults and shear zones, and a strong SE-dipping foliation all favor weathering and groundwater movement down-slope toward and into the collection basin. The proposed pipeline actually crosses a SE-dipping thrust fault" that "is likely to be a major conduit along which groundwater moves. Additionally, downhill from the thrust fault, two high-angle faults likely cross this proposed pipeline." Thus, the Pipeline crosses at least three faults in the Wintergreen area.

Dr. Bartholomew provides a detailed map that shows a spider web of debris-flow areas and debris-avalanche chutes throughout the Wintergreen area from Reeds Gap past the entrance to Wintergreen Resort and up the side of Piney Mountain. This map very clearly illustrates the complex array of geologic features that place the Pipeline and the Wintergreen area at high risk from a catastrophic failure of the Pipeline if it is not moved from the proposed route.

In addition, Friends of Wintergreen participated in a soils study of the Pipeline route through Nelson County by Blackburn Associates, soil engineers, and this study confirmed Dr. Bartholomew's findings. The study is being reported separately but the essential findings back up Dr. Bartholomew's and the Forest Service's concerns for trenching and tunneling through steep slope terrain such as that found in the Blue Ridge Mountains in the vicinity of Wintergreen. This study found several factors that would argue for moving the Pipeline route away from the Wintergreen entrance:

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CO67-12 (cont'd)

- The HDD exit area and the Piney Mountain area have less than the required 60 inches of soil depth to bedrock. This may require blasting or above ground pipeline installation.
- The HDD exit and the Piney Mountain ascent are located in areas having historically high potential for debris flow hazard.
- Tree removal to the extent of the Pipeline right-of-way will increase the potential for soil failure in the HDD exit and Piney Mountain areas, especially if combined with a significant storm event.
- The presence of ancient debris flow fields and boulders creates tremendous void space beneath the trenching area, allowing water to flow unseen and making it difficult to control erosion and water quality both during construction and the operational lifetime of the pipeline. This area is the headwaters of the South Fork of the Rockfish River, a Virginia Scenic River and a Chesapeake Bay watershed tributary.
- The debris flow path resulting from the above conditions will almost certainly impact the Wintergreen Community access road and likely the main road – Route 664 - blocking the only egress to a large residential and resort population.

As stated previously, FOW's separate pipeline engineering study by Brian Melan also identified this area as high risk for landslides to block Wintergreen's only access road. Based on Nelson County's history of catastrophic landslides and loss of life during periodic heavy storm and rain events, FOW submits that it would be unwise to construct a natural gas pipeline through these steep slope areas which could trigger major landslide events and breaching of the Pipeline itself.

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CO67-12 (cont'd)

Unlike the Forest Service, FERC has not challenged Project Sponsors' inadequate soil study for a project of this magnitude in a geologically sensitive area such as the Blue Ridge Mountains. Further, there may be unknown risk to the HDD project from Karst formation in this area. While the presence of Karst is not documented, it will not be known until the HDD is actually attempted; risking failure of the project should Karst be encountered. FOW asks why FERC would authorize such a large and expensive HDD project in the face of this unknown, when a Karst-free alternate route such as the Lyndhurst to Farmville Route through the Rockfish Gap is available. The Rockfish Gap has had multiple tunnels and excavation work done over the years without encountering Karst. An HDD through this area would also be one-eighth the length of the proposed HDD at Reeds Gap. Yet FERC refuses to acknowledge or even evaluate the Rockfish Gap L2F Alternative Route other than with a perfunctory dismissal.

We have chronicled this safety issue in great detail for one reason. This safety issue is the single most important environmental issue facing the Wintergreen area due to the proposed route of the Pipeline. FERC implicitly recognized this when it submitted Data Request 168 to Project Sponsors. In that Data Request, FERC directed Project Sponsors to respond specifically to safety issues that Friends of Wintergreen had raised. FERC stated that "Title 49 CFR Part 192 requires a pipeline operator to establish a written emergency plan that includes procedures to minimize the hazards in a natural gas pipeline emergency. Detail the measures that Atlantic would include in its emergency plan to account for ingress and egress at the Wintergreen Resort in the case of a natural gas pipeline emergency." Yet, despite the catastrophic consequences if there is a Pipeline explosion at or near this location (including up the 2,100 foot path of the Pipeline up the extremely steep side of Piney Mountain and down the 2,124 foot path if the second contingency plan is followed from close to the Blue Ridge Parkway), Project Sponsors

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CO67-12 (cont'd)

have never filed the emergency entrance and exit plan. It has failed to do so because there is no workable emergency plan. And FERC has abdicated its legal responsibility in the draft EIS by offering generic statements that provide no solution to this issue.

As indicated above, an explosion at or near the entrance to Wintergreen would leave a massive crater and would melt at least one-half mile of Route 664, the only road that fire and rescue responders from outside Wintergreen could use to reach the fire. No outside help could reach the fire, leaving 10,000 or more residents and guests of Wintergreen trapped as a wall of fire roars up a "box canyon," fueled by heavily forested south-facing mountains. This would create the greatest disaster in the history of Virginia and one of the greatest disasters in the history of the United States. FOW has submitted two solutions. The Lyndhurst to Farmville Route completely resolves this issue. The 664 South Route substantially resolves this issue by moving the exit point for the Pipeline at least 1,700 feet away from the entrance to Wintergreen and completely avoiding Piney Mountain.

2. The DEIS Grossly Minimizes the Safety Impacts Identified by FOW

DEIS statements and FOW's responses are set forth below.

DEIS Statements: The DEIS provides a superficial and generic response to the very serious safety issues that have been raised by Friends of Wintergreen and many other commenters. FERC states:[62]

> we received numerous comments expressing concern about the integrity of ACP and SHP facilities and their impact on public safety. All of the proposed facilities would be designed, constructed, operated, and maintained to meet or exceed the PHMSA's Minimum Federal Safety Standards in 49 CFR 192 and other applicable federal and state regulations. These regulations include specifications for material selection and qualifications; minimum design requirements; and protection of the pipeline from internal, external, and atmospheric corrosion. In addition to meeting all federal design standards, Atlantic and DTI would also regularly monitor their facilities and perform routine

[62] DEIS at ES-12.

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inspections to ensure facility integrity. These efforts would assist in the early detection of anomalies and would reduce the likelihood of a pipeline incident." And "[w]e received comments from Wintergreen Resort, Bath County, Virginia and several community members regarding single-point access roads and the ability to evacuate in event of an emergency. In a letter sent to Bath County Supervisor, Stuart Hall, Atlantic documented that these concerns would be addressed on a case-by-case basis. In the letter, Atlantic states that their intention is to work with local emergency responders to ensure they are comfortable with their ability to respond to a natural gas emergency, including evacuation. As discussed above, Atlantic plans to accomplish this by holding annual meetings and setting up table-top drills to work through the action items necessary to resolve a natural gas emergency scenario.

Atlantic and DTI **would develop** emergency plans that would include establishing and maintaining adequate means of communication with appropriate fire, police, and other public officials, and developing prompt and effective response to a notice of each type of emergency, including that of a fire located near or directly involving a pipeline facility. Atlantic and DTI **would develop** the emergency response plans in coordination with local emergency response officials, thereby ensuring that its proposed response to a pipeline emergency would be acceptable.

The DOT also requires pipeline operators to place pipeline markers at frequent intervals along the pipeline rights-of-way, such as where a pipeline intersects a street, highway, railway or waterway, and at other prominent points along the route. Pipeline right-of-way markers can help prevent encroachment and excavation-related damage to pipelines. Because the pipeline right-of-way is much wider than the pipeline itself, and a pipeline can be located anywhere within the right-of-way, state laws require excavators to call their state One Call center well in advance of digging to locate underground utilities and ensure it is safe for the contractor to dig in that location.

"In accordance with DOT regulations, the proposed facilities would be regularly inspected for leakage as part of scheduled operations and maintenance, including:

- physically walking and inspecting the pipeline corridor periodically;
- conducting fly-over inspections of the right-of-way as required;
- inspecting valves and maintaining compressor engines; and
- conducting leak surveys at least once every calendar year or as required by regulations.

During inspections, employees would look for signs of unusual activity on the right-of-way and would immediately respond to assess the nature of the activity and remedy with prescribed corrective action.

In addition to the DOT-required surveys described above, Atlantic and DTI would monitor their pipeline systems from their existing Gas Control Centers. These control centers monitor the pipeline systems with sophisticated computer and telecommunications equipment that can detect fluctuations and control flows. Using this equipment, the control centers are able to detect pressure drops along the pipelines and stop the flow of gas to the problem area by isolating sections along the pipe. The control centers operate 24 hours a day, 7 days a week.

Cathodic protection would be installed along the entire length of the new pipelines to prevent corrosion. Atlantic and DTI personnel would check the voltage and amperage at regular intervals as well as the pipe-to-soil potentials and rectifiers. In addition, annual surveys are completed, as described above.

Pipeline markers identifying the owner of the pipe and a 24-hour telephone number would be placed for "line of sight" visibility along the entire pipeline length, except in active agricultural crop locations and in waterbodies in accordance with DOT requirements.

Safety standards specified in Part 192 require that each operator establish and maintain liaison with appropriate fire, police, and public officials to learn the resources and responsibilities of each organization that may respond to a natural gas pipeline emergency, and to coordinate mutual assistance in responding to emergencies. The operator must also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a gas pipeline emergency and report it to appropriate public officials.

In addition, Atlantic and DTI have developed emergency response plans that are used for their entire systems. Atlantic's and DTI's operating personnel attend training for emergency response procedures and plans. During construction of the pipelines, Atlantic and DTI would continue to implement the measures in its emergency response plans associated with the existing pipelines. Atlantic and DTI would review and revise its emergency response plans prior to placing the new facilities in operation. Atlantic and DTI would meet with Local Emergency Planning Committees, which include fire departments, police departments, and public officials, to review plans and would work with these committees to communicate the specifics about the pipeline facilities in the area and the need for emergency response including community notification in the event of an incident. Atlantic and DTI would also meet periodically with the groups to review the plans and revise its plans when necessary. Local Emergency Planning Committee personnel would be involved in any operator-simulated emergency exercises and post-exercise critiques, if conducted. Atlantic and DTI would use all available, reasonable, and relevant means to support the pipeline and facilities if an emergency occurs.

Atlantic and DTI would establish and maintain liaison with appropriate fire, police, and public officials in a variety of ways. Atlantic's and DTI's annual communications would include the following information:

- the potential hazards associated with project facilities located in their service area and prevention measures undertaken;
- the types of emergencies that may occur on or near the Atlantic or DTI facilities;
- the purpose of pipeline markers and the information contained on them;
- pipeline location information and the availability of the National Pipeline Mapping System;
- recognition of and response to pipeline emergencies; and
- procedures to contact Atlantic and DTI for more information.

Atlantic's and DTI's communications with local emergency responders may involve individual meetings, group meetings, or direct mailings. Atlantic and DTI would utilize their existing Gas Control Centers to monitor and isolate sections of pipeline that are difficult to access including river crossings and the portion of the pipeline that would be installed using the HDD method to cross the ANST and BRP. Atlantic and DTI would work with local responders in these areas to identify response requirements and procedures as described above.

CO67-13 **FOW Response:** In the DEIS, FERC has the briefest description of the extraordinary safety concerns raised by FOW. It simply states: "We received comments from Wintergreen Resort, Bath County, Virginia and several community members regarding single-point access roads and the ability to evacuate in event of an emergency. As discussed above, Atlantic plans to accomplish this by holding annual meetings and setting up table-top drills to work through the action items necessary to resolve a natural gas emergency scenario."[63]

This is a generic response to a very specific and extremely dangerous safety issue. As stated above, in Data Request 168, FERC stated that Project Sponsors was legally required to submit a written emergency plan for just such an event at Wintergreen's sole entrance and exit.

[63] DEIS at p. 4-479.

CO67-13 See the response to comment CO67-9.

CO67-13 (cont'd)

Project Sponsors have not responded to the FERC request to detail the measures they would include in its emergency plan to account for ingress and egress at the Wintergreen Resort in the case of a natural gas pipeline emergency. FERC stated in the DEIS (page 605) that letters and meetings had been held between certain stakeholders and Project Sponsors regarding mitigation measures for disaster control in the event of a pipeline emergency. In fact, there has been no letter or discussion from Atlantic to the Wintergreen Community regarding mitigation measures for disaster control in the event of a pipeline accident.

The only response is pablum, a simple cut-and-paste of generic statements that every natural gas pipeline operator provides. This includes: "Atlantic and DTI have developed emergency response plans that are used for their entire systems," "Atlantic and DTI would meet with Local Emergency Planning Committees, which include fire departments, police departments, and public officials, to review plans," "Local Emergency Planning Committee personnel would be involved in any operator-simulated emergency exercises and post-exercise critiques, if conducted," "Atlantic and DTI would work with local responders in these areas to identify response requirements and procedures as described above," and "Atlantic and DTI would use all available, reasonable, and relevant means to support the pipeline and facilities if an emergency occurs.

In providing such a generic response, FERC abdicates its legal responsibility under NEPA to rigorously explore and objectively evaluate all reasonable alternatives so that FERC can sharply define the issues and provide a clear basis for choice among options by the decision maker and the public. This specific safety issue can be resolved only by moving the Pipeline away from the entrance/exit to Wintergreen. How do you resolve "a natural gas emergency scenario" if a 42 inch high pressure natural gas pipeline explodes at the sole entrance and exit to

CO67-13 (cont'd)

Wintergreen Resort, creating a massive, impassable crater and melting at least half a mile of paved road on Route 664, and making any response by other fire fighters impossible? An explosion that instantly incinerates everything within an 1,100 foot radius, sending a wall of fire racing up a "box canyon" funnel fanned by peak winds of up to 80 mph, 90 mph or even 100 mph, trapping up to 10,000 residents and guests? Where is the "table-top drill" that realistically shows how to solve this unsolvable catastrophe?

FOW finds it very distressing that Project Sponsors have ignored FERC's Data Request 168 for over 14 months. We submit that FERC should require Project Sponsors to provide the legally required emergency plan immediately, to share it with FOW and the public, and to meet face-to-face with FOW, Wintergreen Resort, local fire and emergency responders and all other affected persons (including property owners at Wintergreen Resort). We further submit that the path of the proposed route past the only entrance and exit to Wintergreen Resort should not be approved, and that either the Lyndhurst to Farmville Route or the 664 South Route alternates should be mandated so as to eliminate or substantially reduce this catastrophic safety risk.

To summarize the **facts** with respect to a pipeline explosion at or near the entrance to Wintergreen:

- The explosion will create a massive, impassable crater. On August 19, 2000, a 30-inch El Paso Energy natural gas pipeline exploded, killing twelve people in southeast New Mexico. The explosion left a crater 86 feet long, 46 feet wide and 20 feet deep. On April 29, 2016, a 30-inch Texas Eastern Transmission Line exploded near Salem Township, Pennsylvania, a rural area 30 miles east of Pittsburgh. The explosion blew a 12-foot deep, 1,500 square foot hole and scorched 40 acres. "It looked like you were looking down into

CO67-13 (cont'd)

Hell. As far across my windshield as I could see was just a massive fireball," said Forbes Road Fire Chief Bob Rosatti, describing his arrival at the blast scene.

On September 14, 2008, a 30-inch natural gas pipeline owned by Transco exploded near Appomattox, Virginia. "The blast, which created an almost 50-foot crater, destroyed two homes, damaged at least six others and injured five people. "It was what can only be described as a massive fireball, a quarter- to a half-mile tall and at least that wide," said Appomattox County Deputy John Mattox, who was patrolling rural Log Cabin Road when the explosion occurred. "I couldn't see to the other side of it because that fireball was so massive." A 42 inch pipeline will create a much larger, impassable crater.

- The explosion will melt at least one-half mile of Route 664, which is the only road that fire and rescue responders could take to help fight the resulting fire. On December 12, 2012, near Sissonville, West Virginia, a 20-inch natural gas transmission line exploded. This pipeline was much smaller than the 42-inch pipeline in the ACP. "An 800' section of I-77 in both directions (1,600 feet total) was obliterated. The fire melted the interstate and it looked like lava, just boiling." "Kent Carper, president of the Kanawha County Commission, said flames had been shooting 50 to 75 feet into the air before the fire was extinguished. 'It sounded like a Boeing 757. Just a roar," he said. "It was huge. You just couldn't hear anything. It was like a space flight.'" "Trevor Goins lives about a half-mile from the explosion. He got in his car and drove closer, seeing fire that stretched as high as the hilltops. 'The flames were so

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CO67-13 (cont'd)

high, they were so massive,' he said. "Carper said the flames spanned about a quarter of a mile and ran through a culvert under the interstate. "It actually cooked the interstate," he said. "It looks like a tar pit." "Tomblin said a roughly 800-foot section both directions was baked by the heat." "The blast blew a huge hole in the road, throwing dirt, rocks and debris across the interstate."

On June 15, 2015, a 42 inch natural gas pipeline near Cuero, Texas exploded. "A massive fire from an Energy Transfer Partners pipeline scorched a hill and melted nearly a half-mile of roadway." Neighbor Charles Hotz said deputies and firefighters told him and his son to evacuate. 'It sounded like the end of the world," Hotz said. The two saw a fireball more than 100 feet into the air, and although he and his son were only a few feet apart, they had to shout at each other due to the noise from the high-pressure fire. "It felt like standing next to an oven with the fan blowing on you," Hotz said.

The natural gas pipeline explosion near Salem Township on Friday morning, April 29, 2016 "sent an injured man to the hospital, damaged two homes, charred trees and melted a road, with the intense blaze that followed triggering waves of sound, heat and panic through the surrounding area." The melted road was not opened until four days later.

The natural gas pipeline explosion near Appomattox, Virginia seriously damaged state road Virginia 26. "Virginia 26 will remain closed until the Virginia Department of Transportation can inspect the road and determine if it is still stable."

CO67-13 (cont'd)

- An explosion at the entrance to Wintergreen would produce an 1,100-foot blast radius that would instantly destroy the Gatehouse at the entrance, the Wintergreen Police facility (which includes the Wintergreen 911 emergency communications center and the only back up 911 emergency communications center for Nelson County), and the headquarters for WPOA. All persons within this blast radius would be killed instantly. The Wintergreen Fire and Rescue building further up the mountain typically has three personnel, and these are the only personnel who could respond to the resulting fire. The Wintergreen Fire Chief, in a filing with FERC, states that if a fire started at the Gatehouse and blocked egress to the mountain for supporting fire departments from Augusta and Nelson Counties, Wintergreen's own firefighters on the mountain would not be able to stop the immediate spread of fire up to the homes on Devils Knob Loop and Fortunes Ridge.
- The unique configuration of Wintergreen's only egress area represents extremely high risk for an uncontrollable forest fire from a pipeline accident. It is a "box canyon" surrounded by trees and upward slopes that are south-facing, and per the Virginia Department of State Forestry Fire Manual this is ideal topography to support an uncontrollable forest fire. In addition, Wintergreen often has high winds as weather fronts cross the Blue Ridge Mountains. Sustained winds ranging between 30-58 mph are the norm in this mountaintop area, and wind peaks exceeding 80 mph, 90 mph and even 100 mph have been recorded in 2015, greater than the 75 mph threshold for hurricane force winds. In both 2015 and 2016, numerous wind peaks in the

CO67-13 (cont'd)

range of 40-60 mph have been recorded, and the great majority of daily wind peaks exceed 20 mph. Both the topography and wind conditions would rapidly push the fire up the slopes to the populated areas.

3. Data Presented in the DEIS Demonstrate that Safety Risks are Significant – Not "Low"

DEIS Statement: The DEIS contains a lengthy discussion of why natural gas pipelines generally are safe. In fact, the DEIS devotes two entire sections beginning on page 4-479 – Section 4.12.2, titled Pipeline Accident Data, and Section 4.12.3, titled "Impact on Public Safety" - to the proposition that pipelines are safe and, implicitly, that any concerns about pipelines are irrelevant to determining the optimal path of a pipeline. On page 4-483, the DEIS concludes that "[t]he available data show that natural gas transmission pipelines continue to be a safe, reliable means of energy transportation. From 1996 to 2015, there were an average of 66 significant incidents and 2 fatalities per year. The number of significant incidents distributed over the more than 315,000 miles of natural gas transmission pipelines indicates the risk is low for an incident at any given location."

CO67-14

FOW Response: On page 4-471, Section 4.12, titled "Reliability and Safety," the DEIS concedes, in its first sentence that "[t]he transportation of natural gas by pipeline involves some incremental risk to the public due to the potential for an accidental release of natural gas. The greatest hazard is a fire or explosion following a major pipeline rupture." Thus, the greatest risk is precisely what Friends of Wintergreen has described over and over again – a fire or explosion following a major Pipeline rupture at or near the entrance to Wintergreen. And the severity of the risk is a function of two factors – the likelihood of a Pipeline explosion and the impact of such an explosion if it were to occur. Even if it is true that "the risk is low for an incident at any given location," the impact of such an explosion – trapping 10,000 or more residents and guests

CO67-14 Sections 4.12.2 and 4.12.3 of the EIS address the historic incident data for natural gas transmission pipelines, including injuries and fatalities. We acknowledge the potential risk associated with operation of ACP and SHP. However, the data, as presented in the EIS, demonstrate that natural gas transmission pipelines continue to be a safe and reliable means of energy transportation.

CO67-14 (cont'd) of Wintergreen in an uncontrollable fire – is catastrophic. A low risk of a catastrophe is completely unacceptable, especially when there are alternative routes that eliminate the risk (the Lyndhurst to Farmville Route) or substantially reduce the risk (the 665 South Route).

CO67-15 Moreover, the data that FERC presents in the DEIS seems to directly contradict its conclusion that the risks are "low." On page 4-480, the DEIS states that "[d]uring the 20-year period from 1996 through 2015, a total of 1,315 significant incidents were reported." The source for this data is the Department of Transportation's PHMSA (Pipeline and Hazardous Materials Safety Administration). A "significant incident" includes incidents that result in a fatality or personal injury requiring hospitalization, involve property damage of at least $115,807 in 2016 dollars or result in an unintended fire or explosion. FOW submits that 1,315 significant incidents constitute much more than a "low risk," especially when just one significant incident at or near the entrance to Wintergreen would likely lead to catastrophic loss of life and injury.

The data that FERC presents in the DEIS also has one glaring deficiency. The data is grouped and presented in a single time period of 1996-2015. When the data is broken down by recent year, it tells a very different story. In FOW's December 17, 2015 filing, FOW cited statistics, using the same PHMSA data as FERC utilizes, which clearly show that newer pipelines (those installed in the 2010 decade) are failing at a much greater rate than the average failure rate of those installed in the previous 6 decades (1950s-2000s): "The Pipeline Safety Trust's (whose Executive Director was honored at the White House in October 2015 as a champion of change in the transportation industry) most recent research clearly shows that pipelines built in the 2010s are failing at 3-4 times the average failure rate for the past 6 decades (1950-2000). There is an obvious "infant mortality" failure mechanism occurring in newer

CO67-15 There is no evidence to support this claim. Nationwide natural gas transmission pipeline incident statistics show that there are about 3.57 incidents per 10,000 miles of pipeline. See also the response to comment CO67-14.

CO67-15 (cont'd)

pipeline installations that Atlantic is choosing to ignore at the expense of the general public. See **Fig 5** below.

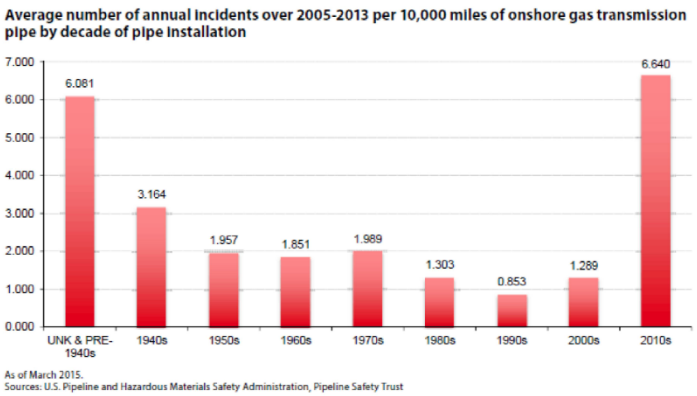

Figure 5: Pipeline Failure data 2005-2013

This data was updated and presented at the Pipeline Safety Trusts Annual Meeting in October 2016 and shows a continuing trend.

CO67-15 (cont'd)

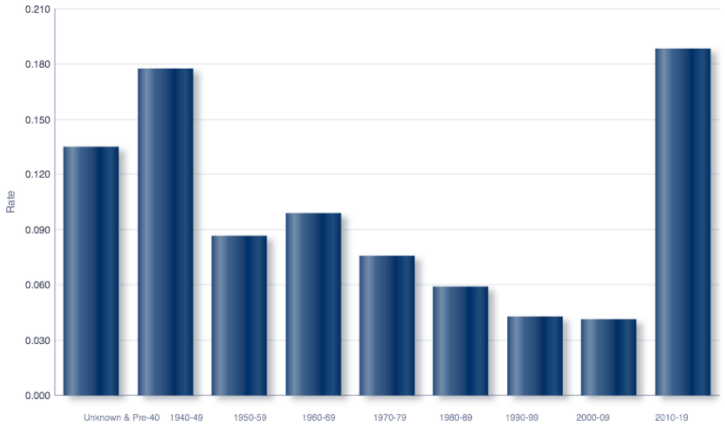

Figure 6: Onshore Natural Gas Pipeline Incidents per 1000 mile of pipe by decade of installation (Pipeline Safety Trust Executive Director Carl Weimer presentation 20 October 2016)

Further there have been spectacular explosions of large natural gas transmission pipelines in the past 10 years on an increasing frequency. Since 2008 there have been four major natural gas pipeline explosions (in Appomattox, Virginia in 2008, in Sissonville, West Virginia in 2012, in St. Mary's Township, Pennsylvania in 2016 and in Spearman, Texas in 2017). These incidents took multiple days to extinguish and would have been FEMA disasters except for the mitigating surrounding terrain. In Wintergreen's case there is no mitigating terrain to limit the impact of a pipeline accident in the vicinity of our entrance. In fact, Wintergreen's terrain – a dry box canyon wooded environment with frequent high winds – magnifies the damage from a pipeline explosion. Yet, for fourteen months, FERC has ignored FOW's December 2015 comment citing

Z-1111

CO67-15 (cont'd)

the PHMSA findings which clearly show that newer pipelines are failing at a much greater rate than those installed in previous decades. These incidents cause the public to lose confidence in the natural gas pipeline industry and to avoid living where these pipelines exist.

On page 721 of the DEIS, FERC comments that pipelines would be "designed, constructed, operated and maintained to meet DOT minimum Federal Safety Standards in 49 CFR 192." There is a strong inference in the DEIS that, despite the legal requirement that FERC respond to safety concerns when determining the most desirable location for a proposed pipeline, FERC wishes to shift that responsibility solely to the Department of Transportation. FERC states, for example, on page 4-471 of the DEIS, that "Under a *Memorandum of Understanding on Natural Gas Transportation Facilities* (Memorandum) dated January 15, 1993, between DOT and FERC, DOT has the exclusive authority to promulgate federal safety standards used in the transportation of natural gas. Section 157.14(a)(9)(vi) of FERC's regulations require that an applicant certify that it would design, install, inspect, test, construct, operate, replace, and maintain the facility for which a Certificate is requested in accordance with federal safety standards and plans for maintenance and inspection, or certify that it has been granted a waiver of the requirements of the safety standards by the DOT in accordance with section 3(e) of the Natural Gas Pipeline Safety Act. FERC accepts this certification and does not impose additional safety standards other than DOT standards." Moreover, on page 4-481 of the DEIS, FERC states that "We received comments regarding the safety history on DTI's existing pipeline systems. The Commission reviews each project based on its own merits and has siting authority for interstate natural gas infrastructure. PHMSA would be notified of and investigate all pipeline accidents and take any necessary resulting action. [T]his information is not relevant to the scope of ACP."

CO67-15 (cont'd)

The findings from the Pipeline Safety Trust strongly suggest that these standards are not sufficient for today's pipeline construction since natural gas pipelines continue to explode at an alarming and unacceptable rate for such a high energy and volatile medium. Wintergreen is not convinced that FERC or the DOT have seriously addressed this problem. Furthermore, FERC's suggestion in the DEIS that existing safety regulations and requirements are, by themselves, adequate to avoid pipeline accidents at or near the entrance to Wintergreen reinforces that perception. A responsible industry regulator would place a moratorium on such applications until root causes are identified and adequate technical, process and oversight changes are made to prevent these incidents.

4. Constructability Issues

In its above comments, Friends of Wintergreen refers to how the extremely serious safety issues at Wintergreen are exacerbated by numerous constructability issues. These issues are summarized below:

- **HDD Tunnel** - The draft EIS only discusses issues with respect to construction of the Pipeline in the Wintergreen area in the context of the 4,639 foot long HDD tunnel under the Blue Ridge Parkway. We note that Project Sponsors has never constructed an HDD tunnel this long, and the issues are magnified by the fact that a 42" pipe is involved. So Project Sponsors has no experience constructing such a tunnel. Moreover, as discussed above, the DEIS has numerous references to the challenges associated with this tunnel, citing a litany of issues that could cause the HDD to fail. On page 2-40, the draft EIS states that Project Sponsors has submitted an entire Appendix to discuss the potential problems. With this extensive list of potential problems, the DEIS then devotes Section 3.3.4.3 beginning on page 3-21 to two

Z-1113

CO67-16 contingency crossing options: "We acknowledge that there is some inherent risk with the HDD method and unknown factors can cause a HDD to fail, and alluvium at the entry and exit locations could complicate the drilling process. In the event that the proposed HDD fails, Atlantic has identified contingency crossing options that it would implement to complete the crossing of the BRP and ANST as described below."

In addition to the above comments, FOW notes that the DEIS fails to mention that there may be unknown risk to the HDD project from Karst formation in this area. While the presence of Karst is not documented, it will not be known until the HDD is actually completed, risking failure of the project should Karst be encountered. FOW asks why FERC would authorize such a large and expensive HDD project in the face of this unknown, when a Karst-free alternate route such as the Lyndhurst to Farmville Route through the Rockfish Gap is available. Rockfish Gap has had multiple tunnels and excavation work done over the years without encountering Karst. An HDD tunnel through this area would also be only 500 feet long as compared to the 4,628 foot length of the proposed HDD at Reeds Gap. A comparison of the two routes clearly favors the Lyndhurst to Farmville Route.

CO67-17
- **Piney Mountain** - While the constructability issues with respect to the HDD tunnel are substantial and possibly incapable of resolution, FOW submits that there also are substantial constructability issues with respect to the 2,100 foot path of the Pipeline from the entrance to Wintergreen up the side of Piney Mountain. There are two categories of issues:

CO67-16 Comment noted. Analysis of the Lyndhurst to Farmville Alternative is presented in section 3.3.7.2.

CO67-17 Comment noted.

CO67-17 (cont'd)

- As Friends of Wintergreen explained in its May 13, 2016 filing, the safety risk associated with the Pipeline is magnified by the extremely steep slope of Piney Mountain, with approximately 1,679 feet of the path at a slope in excess of 40% and portions of the slope as steep as 66%, 69%, 78% and 85%. This creates significant construction challenges and risks. With topsoil no deeper than 12 inches, the right of way clearing and grading for the pipeline will remove a significant amount of topsoil during the laying of the pipe, and this route is highly susceptible to water erosion. When the above factors are taken into account, the trenching and laying of pipeline up Piney Mountain at very steep grades increases the risk of rock and ground slides. Risks from these slides would be exacerbated by frequent major storm conditions in this section of the Blue Ridge Mountains that is highly susceptible to water erosion. Such risks would continue long after construction was completed.
- In its November 22, 2016 filing, Friends of Wintergreen echoed the USFS concerns regarding soil slippage and landslide potential from pipeline trenching in steep slope areas such as Wintergreen and the Blue Ridge Mountains. Nelson County like other counties in the Appalachian Mountains has a history of severe landslides due to heavy rain events. FOW, in conjunction with WPOA and Friends of Nelson, has completed its own independent soil study of the Pipeline path through Nelson County and, like the USFS, have found Project Sponsors' soil analysis to be too high level and not useful to adequately characterize the risk of serious and catastrophic landslides. This joint soil study by Blackburn Consulting Services [exhibit D] recommends that FERC require an "Order One" soil mapping due to the extent of proposed disturbance of unstable and potentially unstable landscape, and the uniquely steep area and previous

Z-1115

CO67-17 (cont'd)

history of debris flow. Such a study will produce a more accurate picture of where stability hazards exist. Generally, the soil study found six high potential debris flow areas along the Pipeline route in Nelson County. Four of these high potential debris flow areas are located at the entrance to Wintergreen and on Piney Mountain. Specifically, they are in the HDD exit area directly across from the entrance to Wintergreen in ancient debris flow areas and on the ascent of the steep slopes of Piney Mountain. The presence of trenching and soil disturbance which will modify the soil's natural angle of repose in these steep slope areas will make it almost impossible to prevent severe rain event driven erosion and landslides.

5. Economic Issues

Beginning with its first filing with FERC on October 23, 2015, FOW has explained that the proposed route has the following material adverse economic consequences for the Wintergreen Area.

i. The Current Route prevents the development of two planned luxury hotels/restaurants, robbing Nelson County of up to $32 million in annual revenue and at least 250 full-time jobs.

The current route of the ACP will prevent two significant economic projects that are underway in the Wintergreen / Nelson County area. First, Rockfish Valley Investments LLC ("Rockfish Investments") has made substantial progress in developing the Spruce Creek Resort and Market.[64] This project will be a 100-acre, five-star resort, hotel, restaurant and public market along Virginia Route 151 in Nelson County. Rockfish Investments has already raised over $35 million and projects annual revenue from the luxury resort and market of $15 million to $20 million.[65] The hotel and market will add over 100 permanent, full-time jobs plus additional

[64] *See* Declaration of Richard Averitt, attached as Exhibit A, at ¶ 3.
[65] *Id.* at ¶¶ 3-4.

Z-1116

seasonal jobs.[66] Rockfish Investments has acquired the land and the necessary regulatory approvals and, until the Pipeline was announced, had planned to complete the project in 2017.

The current route of the ACP will cross directly through the center of the Spruce Creek Resort and Market.[67] Rockfish Investments has unequivocally stated that it will not proceed with its proposed project unless the current route is altered.[68]

Second, Wintergreen Pacific Inc., and Pacific Group Resorts have developed plans for a new $40 million, 150-room luxury hotel at Wintergreen Resort in Nelson County, Virginia.[69] The new hotel will produce an estimated $8.5 million to $12 million in annual revenues and 150 permanent, full-time jobs, plus seasonal jobs.[70] The current route and construction area of the ACP will cross less than 100 feet from the entrance to Wintergreen Resort, which provides the sole access to the new hotel.[71] If the current route is not altered, Wintergreen Pacific Inc., and Pacific Group Resorts have stated that they "would be forced to discontinue development of [the] hotel, or substantially delay its development."[72]

Combined, these two projects represent $75 million in initial investments, between $23.5 million and $32 million in annual revenue for the local community, and at least 250 full-time, permanent jobs and additional seasonal employment. To put this in context, the Virginia Employment Commission estimates that there are 4,429 full-time jobs in Nelson County Virginia, over a quarter of which are in the "accommodation and food services" sector.[73] The Virginia Employment Commission also finds that the Wintergreen Resort is the largest employer

[66] *Id.* at ¶ 4.
[67] *Id.* at ¶ 6.
[68] *Id.* at ¶ 7 ("If the route is not changed, Rockfish Valley Investments LLC will not continue with the Spruce Creek Resort and Market and the local community will not receive the jobs and investment associated with our project.").
[69] *See* Declaration of Henry Thiess, attached as Exhibit B, at ¶ 3.
[70] *Id.*
[71] *Id.* at ¶ 4.
[72] *Id.* at ¶ 7.
[73] *See* Virginia Employment Commission, Nelson County Community Profile, at 22 (last updated Oct. 3, 2015).

in Nelson County and that there is only one employer in the entire county that employs over 100 people (presumably Wintergreen Resort).[74] Thus, the planned Spruce Creek Resort and Market and the Wintergreen luxury hotel would increase the number of jobs in the "accommodation and food services" sector by over 25% and triple the number of businesses that employ over 100 people. In addition, these two projects would contribute millions of dollars in state and local tax revenue, tourism, and other development.

DEIS Statements re Wintergreen Hotel: With respect to the development of the hotel at Wintergreen Resort, the DEIS states on page 4-304 that "Based on information provided by Wintergreen Property Owners Association, Inc. and Wintergreen Resort Inc., the proposed hotel within the Wintergreen Resort area would be over 1 mile east of the project near AP-1 MPs 159.0 to 160.0 where existing homes and businesses are most prevalent and near ski slopes" and that "we believe that construction of ACP and development of the hotel could be accomplished such that impacts associated with ACP are reduced or mitigated for, while maintaining the appeal of the area, as demonstrated by other residential and commercial developments in the area and similar projects throughout the country."

CO67-18

FOW Response: This is a prime example of statements in the DEIS that are entirely conclusory and impossible for the public to evaluate or refute. FERC does not explain how "the impacts associated with ACP are reduced or mitigated for, while maintaining the appeal of the area." Moreover, they do not identify and provide no specifics as to the "other residential and commercial developments in the area and similar projects throughout the country." Both statements are impossible for the public to evaluate and to either confirm or refute, in violation of the NEPA requirements to "sharply defin[e] the issues and provide[e] a clear basis for choice among options by the decision maker and the public."

[74] *Id.* at 20-21.

CO67-18 Section 3.4 of the EIS lists the route variations evaluated during development of the proposed pipeline route, including 31 route modifications filed by Atlantic on January 19, 2017. As noted in table 3.5-1 many of the variations were evaluated at the request of affected landowners. However, for a long linear pipeline project it is not always possible or environmentally preferable to adopt each request from affected landowners, for several reasons. Reasons can include construction considerations at the property in question or immediately adjacent to the property, other environmental considerations immediately adjacent to the property in question, or the general preference to collocate with existing utilities. Impacts on businesses are discussed in section 4.9.8 of the EIS.

CO67-18 (cont'd)

Both statements also are wrong. FOW's statements are **facts,** not just unverifiable expressions of opinion by a regulator that sits hundreds of miles in Washington, D.C. and has no understanding of, or appreciation for, the specifics of Wintergreen Resort or the Spruce Creek Resort and Market. The potential developers of the hotel at Wintergreen Resort and the Spruce Creek Resort and Market have stated that they won't proceed with these projects unless the path of the Pipeline is moved. In the Declaration of Henry Thiess, the General Manager of Wintergreen Resort/Pacific Group Resorts, dated October 21, 2015, he explained that "we carefully selected the location for the luxury hotel based on several factors, such as the scenic view afforded to our guests and the area's overall unspoiled nature and natural resource. Resort hotels and communities, especially those like Wintergreen that are associated with strong recreational and environmental characteristics (such as pristine views, ecotourism, strong conservation covenants, unspoiled nature and natural resources) are especially sensitive to nearby construction and exogenous developments such as the Atlantic Coast Pipeline. We believe the current route of the Atlantic Coast Pipeline will have a negative and permanent impact on these factors. Because of the pipeline's location, we anticipate a measurable decline in tourism and guest traffic to our resort and communities, especially during the construction period. Furthermore, given the fickleness of the tourism consumer and the potential reputational damage to Wintergreen by the nearby presence of this Pipeline, we also believe the downturn could last well past the construction period. If the route is not changed, we may be forced to discontinue development of the hotel, or substantially delay its development, as it undermines the economic viability of the project and impedes our ability to secure financing." On February 22, 2017, Mr. Thiess testified at FERC's public hearing in Lovingston, Virginia, and he confirmed that the above statements in his 2015 Declaration continue to be accurate.

CO67-18 (cont'd)

For FERC to ignore this detailed explanation as to the serious impact of the Pipeline on the possible development of the hotel is inappropriate. And what is most important is that the Manager and the owners of the Resort have determined that they are very uncomfortable moving forward with the hotel unless the path of the proposed route is changed. This is a very serious economic issue for the Resort, Nelson County and the State. Since the alternate routes proposed by FOW solve this issue, one of these routes should be adopted in lieu of the same portion of the proposed route.

DEIS Statements re Spruce Creek Resort and Market: With respect to the Spruce Creek Resort and Market, the DEIS acknowledges that the Pipeline would go right through the middle of the project, but then concluded, with no analysis that "[s]imilar to the Wintergreen Resort, we believe that construction of ACP and development of the Spruce Creek Resort and Market could be accomplished such that impacts associated with ACP are reduced or mitigated for, while maintaining the appeal of the area, as demonstrated by other residential and commercial developments in the area and similar projects throughout the country."

CO67-19

FOW Response: FERC has simply cut-and-pasted the same statements as it made with respect to the Wintergreen hotel. These statements are entirely conclusory and impossible for the public to evaluate or refute. FOW's above response to them is equally applicable here. FOW's statements are **facts**. The Averitt family, which is the developer of the proposed Spruce Creek Resort and Market has unequivocally stated that they will not build the Resort and Market if the Pipeline goes through the middle of the project. Thus, in the Declaration of Richard Averitt IV, on behalf of Rockfish Valley Investments LLC, dated October 16, 2015, Mr. Averitt stated that, "The currently proposed route for the Atlantic Coast Pipeline in the Nelson County/ Wintergreen area has the pipeline crossing directly through the center of the Spruce Creek Resort

CO67-19 See the response to comment CO67-18.

CO67-19 (cont'd)

and Market. If the route is not changed, Rockfish Valley Investments LLC will not continue with the Spruce Creek Resort and Market and the local community will not receive the jobs and investment associated with our project. The pipeline construction will prevent the development of our luxury resort. The two projects simply cannot be built in the same location. Moreover, we carefully selected the location for the luxury resort based on several factors that will be permanently compromised if the pipeline route is not altered. These factors include the scenic view shed afforded to guests at the resort, the few and limited utility easements and other right of ways through the area, and the area's overall unspoiled nature and natural resources. Simply put, we will not proceed with our $35 million project if the pipeline's current route is not altered. This would have a dramatically negative impact on the local community."

And this conclusion was restated by Richard Garland Averitt III, a Partner in Spruce Creek Resort and Market and a former CEO of Raymond James Financial Services, Inc., in a letter dated February 1, 2017 that was filed with FERC. Mr. Averitt stated that "I feel it important to restate that the current path of the pipeline will destroy two proposed new commercial developments in the Rockfish Valley and on Wintergreen, and result in the loss of tens of millions of dollars of new annual revenue to Nelson County and over 250 permanent new jobs. The Spruce Creek Resort and Market, a planned and permitted $30 million 100-acre resort on Highway 151 across from the nationally acclaimed Bold Rock Cidery, will create a minimum of 100 new permanent jobs and turn a 100-acre wooded mountainside into another important contributor of entirely new tax revenues to the county. The impact of these losses is difficult to overstate. This is in addition to many other businesses that will be destroyed (such as the Fenton Inn) and severely impacted (Bold Rock Cidery) by the approved course of the ACP through a growing and increasingly important commercial part of Nelson County."

CO67-20

ii. The Current Route diminishes the value and opportunities for the Wintergreen Resort

Not only will the current route prevent future economic development, it will diminish the value and economic opportunities for Wintergreen Resort. The Resort is the single largest economic driver for Nelson County. It employs over 1,000 individuals, generating an annual payroll that exceeds $17 million. The Resort brings over 400,000 annual visitors to the area. It is Virginia's number one ski resort and includes convention space, premiere lodging, golf, and other activities. The Resort has hosted U.S. presidents, world leaders and diplomats, celebrities, and other VIPs. It has an international reputation and is a unique asset for both Nelson County and Virginia.

As explained above, there is only one entry and exit to the Wintergreen Resort and to the residential community that surrounds it. This access is on Virginia Route 664, which is a designated Virginia scenic byway. The current route of the Pipeline would cross Route 664 twice very close to the gatehouse, police department, and 911 emergency response center for both the Resort and the residential community. Both the Resort and FOW believe this route will have dramatically negative effects on the Resort. When world leaders and other VIPs consider hosting events or staying at the Resort, their own security detail evaluates the risk of terrorist attacks or other security events before approving locations.

In the past, the fact that there is only one entry and exit point for the Resort and the surrounding community has been a recurring issue in these security evaluations; however, in most instances, the security personnel have allowed the dignitary to go forward with the Wintergreen Resort visit. Siting an underground natural gas pipeline at the only entry and exit point for Wintergreen Resort dramatically increases the security risk for leaders and VIPs. The Resort and FOW believe that future security evaluations will cause dignitaries to stay away from

CO67-20 See the response to comment CO67-18.

CO67-20 (cont'd)

the Resort because of this increased security risk. Indeed, the Wintergreen Fire and Rescue Chief explained this concern in his own comments in the FERC Pre-Filing docket.[75]

FOW and the Resort estimate that the current route of the ACP could potentially result in a 20% reduction in overall business for Wintergreen Resort, not counting the temporary reductions caused by construction of the Pipeline at the entrance to Wintergreen for 12-14 months and the extensive use of Wintergreen's roads during construction activities and as "permanent access roads." This permanent reduction will undoubtedly result in a reduction in future revenue and employment opportunities. The current route of the Pipeline will have a dramatic and negative economic impact on the Wintergreen Resort and the surrounding residential community.

DEIS Statements: None.

FOW Response: A 20% reduction in overall business for Wintergreen Resort, not counting the temporary reductions caused by construction of the ACP, would have a catastrophic impact on the Resort, property owners at Wintergreen, Nelson County and the State.

iii. The Current Route diminishes tourism and economic development for "Virginia's Napa Valley."

The current route of the Pipeline also presents adverse economic consequences for Nelson County generally, and specifically, for the Route 151 corridor, also referred to as "Virginia's Napa Valley." Virginia Route 151 is a designated Virginia scenic byway that has recently become the location of multiple wineries, breweries, bed and breakfasts, and other tourist attractions. For example, five wineries, three breweries, a cidery, and a distillery have all opened along Route 151 in recent years. These destinations bring much needed tourist revenue to the area, and importantly, jobs. For example, one of the breweries – Devils Backbone Brewing

[75] *See* Comments of Curtis Sheets, Chief of Wintergreen Volunteer Fire Department, Docket. No. PF15-6 (filed Mar. 20, 2015).

Z-1123

Company – is now the sixth largest employer in the county and the 17th fastest growing company in Virginia. The Route 151 corridor has hosted music festivals and other events. What distinguishes the Route 151 corridor from other tourist destinations is that it advertises itself as a "green" tourist destination and the businesses along Route 151 tout themselves as being in a naturally pristine area. The current route of the Pipeline compromises this position and particularly during construction of the Pipeline, will diminish the tourism this corridor enjoys.

DEIS Statements: On page 4-400 of the DEIS, it states that "[w]e received comments expressing concern that the tourism economy in the Rockfish Valley and Wintergreen area in Nelson County, Virginia would be negatively impacted by construction and operation of the projects. The Rockfish Valley and Wintergreen area includes Spruce Creek Park, Wintergreen Country Store, Elk Hill Baptist Church, Nelson Scenic Loop Trail, the Rockfish Valley Kite Festival Grounds, Wintergreen Resort, along with several wineries, microbreweries, and resort areas. Commenters expressed concern that the Pipeline would adversely affect environmental resources; reduce food, shelter, and habitat for wildlife; and diminish enjoyment of the trail for visitors, thereby affecting the tourism economy in the area. Scenic travelers and tourists to Rockfish Valley would experience temporary visual and noise impacts associated with construction personnel and equipment and vegetation removal associated with construction workspaces. Atlantic would coordinate with Rockfish Valley and Wintergreen area businesses and recreational stewards to inform them of construction schedules and traffic volumes and would, to the extent practicable, schedule construction activities to avoid conflicts with special events. We have found no evidence that short-term effects of pipeline construction have long-term significant impacts on the tourism industry in areas where pipeline construction has

occurred. As such, we conclude recreational uses and tourism activities in the project area would not be affected by operation of the project."

CO67-21

FOW Response: The DEIS admits that "scenic travelers and tourists to Rockfish Valley would experience temporary visual and noise impacts associated with construction personnel and equipment and vegetation removal associated with construction workspaces." This is an understatement. Construction at the entrance to Wintergreen Resort is scheduled to continue for at least 12-14 months and maybe longer. This will involve a heavy increase in construction traffic on Route 664 and Route 151, which is the central road for visitors to the numerous ecotourism destinations in Nelson County. The construction schedule is for 6 days a week, 10 hours per day, meaning construction traffic all day Saturday. And the schedule includes 7-day per week, 24 hours per day of HDD drilling at the entrance to Wintergreen. "Construction traffic" means a steady procession of dump trucks, logging trucks, trucks carrying 40-foot long pipe, and numerous other types construction vehicles that are described in the DEIS. This will be a substantial deterrent to regular and new customers who frequent this corridor for a peaceful, relaxing experience in a beautiful natural space. The DEIS thus greatly understates the impact on businesses in this area. And once a visitor has had a negative experience, it is likely that he or she will not return.

The DEIS further states that "we have found no evidence that short-term effects of pipeline construction have long-term significant impacts on the tourism industry in areas where pipeline construction has occurred." Again, this is the typical conclusory statement that FOW has found over and over again in the DEIS. It cites no specific facts, so it is impossible for FOW or other members of the public to evaluate or rebut it.

CO67-21 Comment noted.

iv. The proposed route has had a serious adverse impact on property values in the Wintergreen area, and this impact will continue and accelerate if the proposed route is not moved from Wintergreen property.

CO67-22

As indicated above, resort communities such as Wintergreen are attractive because of their strong recreational and environmental characteristics (such as pristine views, ecotourism, strong conservation covenants, unspoiled nature and natural resources). Wintergreen is especially sensitive to the lengthy, disruptive construction of the Pipeline and to the permanent scars on WPOA land that will be visible from many houses and condos in Wintergreen. The announcement that the proposed route would cross the entrance to Wintergreen and damage a very visible 2,100 foot path up the side of Piney Mountain has already had a substantial adverse effect on Wintergreen property values. FOW submits that this impact on property values will be permanent and will accelerate if the proposed route is not moved from Wintergreen property.

A comparison of real estate sales in Wintergreen for the 15 months prior to Project Sponsors' announcement in June 2015 that it had selected the current proposed route to the 15 months after the announcement shows the following impact:

- Houses on the Mountain showed an average decline in sales price of 10.5%
- Condos on the Mountain showed an average decline in sales price of 10%
- Lots showed an average decline in sales price of 34%.

By comparison the median price of real estate sales in the adjoining Charlottesville market increased by 14%.

An analysis of 2015 real estate sales in Nelson County shows similar results. Wintergreen is located in Nelson County, and the proposed route crosses a substantial portion of Nelson County. Based on information provided by Nest Realty, total sales in Nelson County

CO67-22 Comment noted.

CO67-22 (cont'd) declined by 13.15% in 2016, as compared to 2015, and the average sales price declined by 1.82%.

The 10% decline in property values at Wintergreen translates into a $100 million loss in value. This decline is material by itself. But it is even more significant because Wintergreen contributes over 40% of the real property tax revenues to Nelson County. The $100 million loss in real estate values will require either that the County slash its budget and services or that it shifts the tax burden to other residents in the County who are less able to pay such taxes. And the decline in Wintergreen property values will only continue and accelerate if the Pipeline actually is built on the proposed route. When the other impacts from the loss of the hotel at Wintergreen and the cancelled plans to build the Spruce Creek Resort and Market are taken into account, the impact of the Pipeline on the proposed route will be very material.

v. Alternative 28 was never proposed by Friends of Wintergreen as an alternate route.

CO67-23 In FERC's evaluation of alternate routes on page 3-29 of the DEIS, in Section 3.3.7.1, it is stated that "Alternative 28 was proposed by the Friends of Wintergreen as a means to avoid project impacts around the greater Wintergreen area and to minimize steep slope construction." This statement is completely inaccurate. Project Sponsors claimed in a filing with FERC that Friends of Wintergreen was proposing Alternative 28, This was simply an attempt by Project Sponsors to drive a wedge between FOW and other citizens advocacy groups in Nelson County.

In its Motion for Leave to Answer and Answer of Friends of Wintergreen, Inc. filed December 29, 2015, FOW responded on page 4 to Project Sponsors' inaccurate statements as follows:

> "In its answer, ACP either mischaracterizes or misunderstands FOW's comments and recommended alternative routes or route deviations. In particular, ACP asserts that FOW advocated Alternative 28 and argues that "the Commission should give no further

CO67-23 Comment noted.

CO67-23 (cont'd)

> consideration to the alternative route proposed by Friends of Wintergreen. FOW, however, never proposed the full length of Alternative 28 as an alternate route. Rather, FOW proposed only that one critical section of Alternative 28, the crossing of the Blue Ridge Mountains at Rockfish Gap, be utilized in lieu of the crossing that ACP has proposed at Reed's Gap. FOW noted that available vacant property could be used for horizontal drilling of a substantially shorter tunnel at Rockfish Gap than the tunnel ACP proposes to drill underneath the Blue Ridge Parkway at Reed's Gap."

FOW thus only proposed that crossing the Blue Ridge Mountains next to I-64 at Rockfish Gap be utilized as part of what is referred to in the DEIS as the Lyndhurst to Farmville Route. FOW is at a loss to understand why the DEIS inaccurately states that FOW supports Alternative 28 fourteen months after it refuted Project Sponsors' mischaracterization.

V. CONCLUSION

Wherefore, Friends of Wintergreen respectfully requests that the Commission:

1. Condition approval of Project Sponsors' application in the above-captioned proceeding upon a requirement that the route for the Project be moved from the proposed route near Reed's Gap to one of the route alternatives or deviations identified above, or to some other alternative route that alleviates the serious negative consequences to Wintergreen and the area surrounding the Project Sponsors' proposed route;

2. Modify the draft EIS to reflect the facts provided by Friends of Wintergreen above and to delete all conclusory statements and expressions of opinion that are not supported by specific facts prior to issuance of the final EIS; and

3. Direct Project Sponsors to answer FOW's questions listed in Attachment 13 to the Friends of Wintergreen May 13, 2016 Comments concerning impacts from construction of the Project.[76]

[76] *See* Attachment 3.

Z-1128

Friends of Wintergreen reserves the right to respond to any supplemental responses by Project Sponsors to the draft EIS, to respond to any additional filings that Project Sponsors make subsequent to the December 30, 2016 release of the draft Environmental Impact Statement, propose new alternatives, and to respond to new alternatives proposed by Project Sponsors or other parties in this proceeding.

Respectfully submitted,

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Counsel for Friends of Wintergreen, Inc.

Dated: March 24, 2017

CERTIFICATE OF SERVICE

I hereby certify that I have this day caused to be served the foregoing document upon each person designated on the official service compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 24th day of March, 2017.

/s/ Emily Ray
Emily Ray
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The attachments to this letter have been reviewed by FERC staff and can be found on the FERC eLibrary site under FERC Accession No. 20170324-5252.

COMPANIES/ORGANIZATIONS COMMENTS

CO68 – Friends of Buckingham

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FERC DEIS comments for the Atlantic Coast Pipeline
Re: Docket No CP15-554-000

April 5, 2017

Heidi Dhivya Berthoud
Secretary, Friends of Buckingham
Friends of Buckingham (FoB)
PO Box 61 Buckingham VA 23921
friendsofbuckinghamva@gmail.com

Friends of Buckingham believes there are many reasons the ACP DEIS is very inadequate, and the many severe impacts cannot be "reduced to less than significant levels". We ask you to stop and do a more thorough impact statement.

Our major concerns:

Lack of proven need, and costs to the ratepayer
Health and safety risks
Environmental Justice
Outdated assessment tools for evaluating climate change effects.
Disregard for cultural and economic losses to communities all along the proposed routes.

CO68-1 **Lack of proven need, and costs to the ratepayer:** We send you to an industry insider, Thomas Hadwin's astute arguments. His article, "ACP in a Nutshell" is damning of the entire project and makes it very clear the sacrifices that we, the people would make, are an outrage in a democracy, or anywhere. http://www.friendsofbuckinghamva.org/friends/the-acp-in-a-nutshell/

Physicians for Social Responsibility speaks for us here: this was penned by Lakshmi Fjord, PhD

FERC should not issue a permit for the construction of the proposed compressor station in Buckingham, Virginia.

FERC should take health effects into account in making its decision.

CO68-2
- According to ACP's own air permit application for the Union Hill compressor station, the facility would generate yearly emissions of 468,450 combined pounds per year of nitrous oxide, carbon dioxide, volatile organic compounds (VOCs), particulate matter, and hazardous air pollutants (HAPs). FERC's environmental impact statement estimates this compressor station's climate change contribution at 293,688 metric tons per year. These emissions would be dangerous to health and destructive of a livable climate.

CO68-3
- 14 gas-fired turbines would be needed to transmit the fracked gas over 200 miles. This distance is far greater than the industry standard of 40-70 miles between compressor stations. Huge transmission distances require ACP compressor stations to operate at the highest allowed levels of pressure, increasing the potential for fires and explosions.

CO68-1 In general, natural gas prices are mainly a function of market supply and demand. It is beyond the scope of this EIS to assess the potential change in the future price of natural gas due to changing demand, and the exact future price of natural gas to the consumer is unknown. How any savings are allocated or passed on to consumers is more appropriately addressed through the state public utilities commission or applicable agency with jurisdiction over the local distribution agency.

See also the response to comment CO46-1.

CO68-2 See the response to comment CO66-55.

CO68-3 We disagree. Potential safety impacts would not increase as a result of higher compressor station pressures. Section 4.12 includes our discussion of reliability and safety of ACP and SHP.

CO68-4

- FERC's Draft Environmental Impact Statement (DEIS) states there will be "no health impacts" from this extremely large complex of pipelines in Union Hill. There is no explanation given for why FERC ignores the latest independent scientific studies on the potential health threats caused by living near compressor stations.

FERC should not allow this new environmental injustice to be perpetrated.

CO68-5

- Over 110 households in the predominantly low-income, community of color, Union Hill would be placed in close proximity to this dangerous compressor station.
- Union Hill is the site of a former slave plantation; the majority of nearby residents are the descendants of slaves who built this community after the Civil War. It is illegal under the National Environmental Policy Act (NEPA), and it is immoral, to concentrate this environmental threat on the back of a low-income community of color.

CO68-6

- The site also encompasses as many as 200+ unmarked slave burial sites on this former plantation land.

The risks to the climate are unacceptably high.

CO68-7

- Methane is 86 times more powerful than carbon dioxide as a heat-trapping gas when considered over a 20-year timeframe. That's exactly the timeframe we should consider, since that's about how long we have to get our climate emissions under control.
- Recent scientific studies summarized in PSR's recent report, *Too Dirty, Too Dangerous: Why Health Professional Reject Natural Gas*, indicate dangerous levels of methane leakage from compressor stations. For example, a study in Texas' Barnet Shale found that methane emissions from compressor stations were substantially higher than emissions from well pads. Separate field studies of processing plants and compressor stations found methane emissions to be 3.2 to 5.8 times higher than estimates that the EPA had issued based on industry self-reporting.
- Methane also leaks from the distribution pipelines that carry the gas from the utility company through our cities and towns and to our homes. In fact, the overall leakage of methane, looking across the entire supply chain, is so high that it makes fracked gas about as bad for the climate as burning coal.

Physicans for Social Responsibility has done excellent research on why we should reject natural gas all together: http://www.psr.org/resources/too-dirty-too-dangerous.html

Why health professionals reject natural gas

PSR's report, ***Too Dirty, Too Dangerous: Why Health Professionals Reject Natural Gas,*** based on summaries of recent medical and scientific studies, clearly conveys the health threats that accompany use of methane as a fuel. Here are some of the key findings it reports:

- Proximity to fracking operations are associated with congenital heart defects, increased risk of high-risk pregnancy and premature birth, worsening asthma, and increased rates of hospitalization for cardiac, neurological and cancer-related problems.
- Methane accelerates climate change. It is more potent a greenhouse gas than carbon dioxide over its first hundred years in the atmosphere—fully 86 times more potent over its first 20 years.
- Methane has been found to leak from fracking wells, equipment, and pipelines at rates that make it worse for the environment than coal. Those leakage rates, if sustained, move us closer to climate catastrophe.

The following was penned by Irene Leech, PhD, a member of FoB:

CO68-8 The DEIS prepared for the Atlantic Coast Pipeline and Supply Header Project that was released December 30, 2016 is riddled with vague generalizations, lacking specific detail, and summarily

CO68-4 See the response to comment CO66-55.

CO68-5 See the responses to comments CO49-2 and CO65-3.

CO68-6 See the response to comment CO49-1.

CO68-7 Comment noted.

CO68-8 See the response to comment CO6-1.

COMPANIES/ORGANIZATIONS COMMENTS

CO68 – Friends of Buckingham (cont'd)

CO68-8 (cont'd) dismisses issues raised by citizens without even appearing to consider the information presented. A significant portion of ACP provided information is missing and some is not expected to be available until September. The applicant submitted a large quantity of information shortly after the DEIS was released; much that appeared to have been collected well before the release. It appears that the applicant has purposefully neglected to provide key information in a timely manner. This is not fair to the affected landowners and communities.

CO68-9 There is structural bias against landowners and communities in the FERC process. There are close relationships among the applicant and the contractor hired by FERC to conduct much of the work that have at least the appearance of bias.

CO68-10 While the information provided by FERC on the process indicates that a collaborative process is used, citizens of Buckingham and other affected counties have not found this to be true. As the location of the only compressor station in Virginia, citizens requested Scoping and DEIS Response meetings in Buckingham. These were not granted and affected citizens, many of whom are elderly, had to travel to another county in the winter for both meetings. Further, the procedure used for the DEIS Response meetings kept speakers from hearing each other by relegating speakers to intimidating circumstances in private rooms. Even the two meetings held in Buckingham were not conducive to citizen participation. The original Open House was held in direct conflict with the annual meeting and fundraiser for the local historical association. The Open House for the compressor station was held at night after a significant snow event which meant schools were closed and many citizens did not feel it was safe to be out after dark. Affected citizens requested that the meeting be rescheduled but our requests were denied so many of us were unable to participate due to safety concerns. The applicant held several community meetings with selected community representatives but citizens were frustrated with the tightly controlled agenda and daytime scheduling that kept many from attending. It appeared to citizens that the applicant had more concern with selection of the paint color for the compressor station buildings than with citizen concerns about health and safety. Overall, citizens felt their concerns were brushed off and ignored. It is impossible to describe the process that occurred as collaborative.

The ACP is proposed to bisect the farm business my family has operated for over a century. It is proposed to traverse our primary pastures, hayfields and cropland, requiring us to cross the pipeline multiple times each day as we conduct our business. Almost every building on the 1,000 acre property would be within the Blast Zone, four miles after the compressor station. This includes the 1804 farmhouse that is largely unaltered, related out buildings, and the primary barns and equipment sheds

CO68-11 used by the business. The applicant denied our request to move the pipeline to the far edge of our property where it would have the least impact on our business and our net worth. We will be forced to

CO68-12 cross the pipeline multiple times every day and any future uses of our property will be constrained by the presence of the pipeline. The stress of living within the Blast Zone, with gas at the highest level of

CO68-13 pressure, thin pipe walls, the closest cut off valve nearly 20 miles away, and with the infrastructure monitored hundreds of miles away using extremely undependable wireless technology is likely to make us have to abandon our heritage, culture and largest asset. With minimal oversight, the applicant will be allowed to set risk levels that provide it with the highest earnings, ignoring our concerns about health and safety.

CO68-9 We disagree. As discussed in section 1.3, third-party contractors are selected by Commission staff and funded by project applicants. Third-party contractors work solely under the direction of FERC staff, who directs the scope, content, quality, and schedule of the contractor's work. FERC staff independently evaluates the results of the third-party contractor's work, and the Commission, through its staff, bears ultimate responsibility for full compliance with the requirements of NEPA. Further, per the procedures in 40 CFR 1506.5(c), third-party contractors execute a disclosure statement specifying that they have no financial or other conflicting interest in the outcome of the project. Third-party contractors are required to self-report any changes in financial situation and to refresh their disclosure statements annually.

CO68-10 See the response to comment CO66-52.

CO68-11 Comment noted.

CO68-12 Section 4.8.1.1 describes the types of activities that would be prohibited within the permanent right-of-way.

CO68-13 See response to comment letter CO56-66. .

The legality of the DOT safety requirements under 49 CFR 192 are outside the scope of this EIS.

CO68-13 (cont'd)

Because this is considered an area of low concern due to the low human population, the thinnest pipe is allowed and the automatic cut-off valves will be up to 20 miles apart. While the original plans showed that the entire pipeline would be monitored with fiber broadband, the best available technology, the applicant now plans to monitor using wireless technology that is notoriously undependable and poorly supported through this rural area. Further, we are concerned that although it is widely acknowledged that high levels of methane escape pipeline infrastructure, the Trump Administration has removed the requirement that pipeline operators measure and report these emissions. Further, efforts are underway to reduce the staff of the Environmental Protection Agency by a third or more, removing critical oversight of water, air, and land. Virginia has also limited staffing in the state environmental agency and there is heavy political pressure on that agency to allow this industry to be largely deregulated and not encumbered by expensive regulation.

At the end of the Buckingham Planning Commission Public Hearing for the communications tower at the compressor station on March 27, 2017 ACP representative Emmett Toms informed those present that fiber broadband had been removed from the project in response to directions from both the federal and state (State Corporation Commission) regulators. They were responding to complaints by AT&T and other telecommunication companies. We cannot find documentation of those regulatory directions and the applicant indicated that it will not be possible to provide it prior to the end of the DEIS Comment Period.

Because PHMSA has never been funded so it could meet its mandated tasks, Congress directed it to prioritize populated areas over rural areas. The new Secretary of Transportation pointed to her commitment to reduce energy industry regulation, signaling that affected landowners and communities cannot anticipate that our health and safety concerns will be addressed. It appears that we are being sacrificed.

Since we do not desire to host this infrastructure, anticipate minimal one-time compensation that will pay the property taxes on the land used by the pipeline for the years that it is in service if we are lucky, and expose us to daily risk from infrastructure over which we have no influence, it seems that at the very least we should get the best safety available. Fiber broadband, as originally planned, must be used to monitor the pipeline. It is significantly more dependable than wireless technology. Since our property is so close to the compressor station and the odorless, colorless, and tasteless gas will be under the highest pressure when it crosses our property, the thickest pipe should be required and automatic cutoff valves should be placed every three miles. We deserve at least the same level of safety as those who live in more populated areas.

CO68-14

The DEIS … However, the data presented in Appendix U, Racial, ethnic, and poverty statistics for census tracts within 1 mile of the Atlantic Coast Pipeline and Supply Header Project, indicates that the path of this infrastructure has a disproportionate impact on disadvantaged communities. Ten of eighteen (55.5%). tracts have populations with income below the poverty level. Statewide percentages for population below the poverty level along the ACP are 18.1%-West Virginia, 11.5%-Virginia, and 17.6%-

CO68-14 See the responses to comments CO49-2 and CO65-3.

CO68 – Friends of Buckingham (cont'd)

CO68-14 (cont'd)

North Carolina. Eleven of thirteen (84.6%) of contractor yards are in tracts with higher minority unemployment than the unemployment rate in the respective state.

Data related to the portion of the affected population that is elderly is not presented and there is no apparent consideration of the health issues faced by those living within 1 mile of the infrastructure. However, research conducted by Lakshmi Fjord (2017) in Buckingham documented the fact that affected citizens are older than the population of the state. Further, these citizens already have significant health challenges. The real estate located within the Blast Zone of the ACP is the largest asset of most of these citizens but they will not be adequately compensated for the loss of property value if they are compensated at all. Given this information, it is clear that the path of the ACP disproportionately affects disadvantaged communities.

Since the DEIS claims there is no economic justice issue, there is no proposed mitigation. However, as Fjord (2017) reports, the financial loss to these citizens is of less concern than the cultural and historical loss.

Yogaville Concerns, by Jeeva Abate

ECONOMIC IMPACT

Yogaville is a retreat and learning center that draws thousands of people annually, from all over the world, who come to take programs that focus on health and wellbeing, meditation, and stress reduction, as well as to visit our unique interfaith shrine, LOTUS.

CO68-15

As a residential community and the headquarters of an international organization, we established ourselves here because of the clean and peaceful environment. We are concerned that this project puts our financial survival at risk in the short term during the construction phase and in the long term if the pipeline is routed 1,000 ft. from Yogaville and the proposed compressor station is located an estimated five miles from us.

COMPRESSOR STATION

CO68-16

There are only three compressor stations on the proposed 600-mile pipeline and one of them is proposed to be about five miles from Yogaville, an area where hundreds of people reside and approximately 6,000 guests and students attend annually. The compressor station is sized at an est. 55,000 HP, situated on a 75-acre lot. It would run 24/7/365.

We are concerned about documented health risks consistently reported by people living near compressor sites. We refer you to the report filed with FERC by the Madison County, New York Health Department on October 15, 2014, Docket #CP14-497-000, in regards to Dominion's filing to place a compressor station in their county.

This report explains at length the potential health risks during the construction process, as well as when

CO68-15 Impacts on Yogaville and the Satchidananda Ashram are discussed in section 4.9.5 of the EIS. Yogaville is over 4 miles from the proposed Compressor Station 2; and the Light of Truth Universal Shrine at Yogaville is 1 mile from the proposed ACP route alignment and over 1 mile from the nearest proposed HDD location. We believe that the project locations are sufficiently distant from the Yogaville properties so that people enjoying the peaceful and serene environment would not be disturbed by project construction or operation. Therefore, we conclude no direct or indirect impacts on tourism and visitation to Yogaville would result from construction and operation of the projects.

CO68-16 Air quality impacts are analyzed throughout section 4.11.1, including VOC emission levels. Radon exposure is discussed in section 4.11.1.4.

CO68-16 (cont'd)

the compressor is operational. It cites **harmful impact to the respiratory, cardio-vascular, and neurological systems, as well as to other systems and organs in the body.** It describes the **air pollution** that comes from blowdowns that release toxic chemicals used to process the gas and methane into the atmosphere. **Noxious fumes, increased toxic poisoning levels, radioactive materials, and large amounts of contaminants** have been reported at compressor sites, including **cancer-causing volatile organic compounds.** It cites a blowdown event in Bernville TX that emitted 61.31 tons of VOCs in forty-three minutes—an entire year's threshold of VOCs from a major source emitted in less than an hour. The online link to that report can be found here:

http://www.healthymadisoncounty.org/linkeddocs/reports/FERCcomments.pdf

CO68-17

We are concerned about noise, both audible and low frequency, that has been documented as causing vibro-acoustic disease, resulting in brain aneurysms, seizures, nervous system disorders, heart disease, and ruptured eardrums. People who live near compressors have also reported: headaches, fatigue, dizziness, nausea, nosebleeds, sore throats, sinus congestion, rashes, blisters, lesions, respiratory distress, hearing difficulties, ataxia, difficulty with balance, and lack of sleep. Blood tests show exposure to toxic chemicals. _____

CO68-18

Exclusive: Pipeline Safety Chief Says His Regulatory Process Is 'Kind of Dying'

With 'few tools to work with,' PHMSA's Jeffrey Wiese says he is creating a YouTube channel to persuade industry to voluntarily improve safety.

By Marcus Stern and Sebastian Jones

Sep 11, 2013

Jeffrey Wiese (center), PHMSA's associate administrator for pipeline safety, testifies at a hearing on pipeline safety. Credit: Rep. Gus Bilirakis

CO68-17 Through FERC's dispute resolution service helpline, we are aware that induced vibration, or a low frequency sound from pipelines, has occurred at a limited number of natural gas facilities in the over 300,000 miles of transmission pipeline in the United States. However, we are unaware of wide-scale cases of low frequency noise from natural gas transmission pipelines. With hundreds of thousands of residents near natural gas pipelines, we have seen no system evidence that natural gas pipelines are inducing noise effects on the local population. This appears to be an isolated issue that continues to be addressed through the dispute resolution service and landowner helpline.

CO68-18 Comment noted.

Jeffrey Wiese, the nation's top oil and gas pipeline safety official, recently strode to a dais beneath crystal chandeliers at a New Orleans hotel to let his audience in on an open secret: the regulatory process he oversees is "kind of dying."

Wiese told several hundred oil and gas pipeline compliance officers that his agency, the Pipeline and Hazardous Materials Administration [1] (PHMSA), has "very few tools to work with" in enforcing safety rules even after Congress in 2011 allowed it to impose higher fines on companies that cause major accidents.

"Do I think I can hurt a major international corporation with a $2 million civil penalty? No," he said.

Because generating a new pipeline rule can take as long as three years, Wiese said PHMSA is creating a YouTube channel to persuade the industry to voluntarily improve its safety operations. "We'll be trying to socialize these concepts long before we get to regulations."

Wiese's pessimism about the viability of the pipeline regulatory system is at odds with the Obama administration's insistence [2] that the nation's pipeline infrastructure is safe and its regulatory regime robust. In a speech last year [3], President Obama ordered regulatory agencies like PHMSA to help expedite the building of new pipelines "in a way that protects the health and safety of the American people."

Wiese's remarks also conflict with industry's view. Brian Straessle, a spokesman for the American Petroleum Institute [4], which represents much of the oil and gas industry in Washington, D.C., said the industry "is highly regulated at the state and federal level, and there are strong standards in place to govern the pipeline infrastructure that helps fuel our economy.

"Pipeline operators have every incentive to protect the environment and their financial health by preventing incidents," Straessle said.

But Wiese's remarks ring true with people who've long been concerned about pipelines near their homes.

Susan Luebbe, a Nebraska rancher who has fought for five years to keep the proposed Keystone XL pipeline from crossing her cattle ranch, reacted with bemusement when Wiese's comments were relayed to her by cell phone as she repaired a barbed-wire fence. She and other Keystone opponents have long been suspicious of assurances by TransCanada, the company building the line, that it will be safe because it will meet or exceed PHMSA regulations.

"It's kind of sad in a way, when we push for laws to be enforced and they just throw up their hands, PHMSA and all them, and say they can't deal with it," Luebbe said.

Public confidence in pipeline safety has been tested by a spate of serious accidents. In 2010, a natural gas line explosion in San Bruno, Calif., set off a 95-minute inferno that killed eight people, destroyed 38 homes and damaged scores of others. That same year, a pipeline spilled more than 1 million gallons of Canadian tar sand crude into Michigan's Kalamazoo River [5].

The ongoing clean-up of that one spill has already cost more than $1 billion. This year, a pipeline rupture deposited at least 210,000 gallons of heavy Canadian crude in the streets of Mayflower, Ark [6].

Wiese, as head of PHMSA's Office of Pipeline Safety, is the federal official most directly charged with preventing these types of accidents. But as his July 24 comments in New Orleans reflect, he is constrained by a pipeline safety budget that has remained flat at about $108 million for the past three years, despite the construction of thousands of miles of new pipeline. Most of that money comes from industry user fees and an oil spill liability trust fund. Taxpayers pay just $1 million a year toward the safety program.

The Obama administration has consistently asked for more money for pipeline safety, but those requests have fallen victim to Congress' inability to pass anything more than stopgap budgets for the past three years. The administration asked for a 60 percent increase for this year, but the continuing budget standoff and effects of sequestration instead have tightened the budget.

Two stark numbers illustrate the challenge the administration faces in ensuring pipeline safety while pressing ahead with new pipeline projects: 135 federal inspectors oversee 2.6 million miles of pipeline, which means each inspector is responsible for almost enough pipe to circle the Earth. PHMSA says it has the help of about 300 state inspectors, but not all states have inspection programs.

According to an analysis of inspection records by the nonprofit Public Employees for Environmental Responsibility [7] (PEER), only a fifth of the nation's 2.6 million miles of pipeline have been inspected by PHMSA or its state partners since 2006. PEER obtained the records through the Freedom of Information Act.

InsideClimate News tried for several weeks to arrange an interview with Wiese about his remarks. At one point PHMSA spokesman Damon Hill wrote in an email, "I'm trying to help you get what you need for your story and in no way are we saying that Mr. Wiese or anyone else in PHMSA is unavailable to provide information or clarifications."

But Hill didn't respond to subsequent emails requesting to speak with Wiese and other PHMSA staffers who attended the pipeline safety conference in New Orleans, and Wiese didn't respond to interview requests sent to his official email address.

PHMSA: A Thin Green Line Protecting the Public from Spills and Explosions

PHMSA was created in 2004 as an agency within the federal Department of Transportation. It is a thin green line intended to ensure the safety of energy pipelines that crisscross the United States. Pipelines also carry other hazardous materials, including poisonous, carcinogenic chemicals like benzene. The agency's tasks include auditing the records of almost 3,000 pipeline operators; developing, issuing and enforcing pipeline safety regulations; conducting industry training, and investigating accidents.

The challenges facing regulators are daunting. More than half of the nation's pipeline was buried prior to 1970, about the same time the nation's first pipeline safety law was enacted and the Office of Pipeline Safety created. Much of the old pipe remains a question mark in terms of its location, composition, level of corrosion and quality of welding.

Some pipelines in the East are more than 100 years old. In the West, suburbs have grown up alongside lines installed when the areas were uninhabited. Age is not necessarily a critical factor if pipe is properly installed, maintained and operated. But many pipelines have changed ownership so many times that installation and maintenance records are unavailable.

In its budget proposal for this year, PHMSA defended its record, stating that its work "often goes unnoticed due to its successful efforts in reducing and containing serious incidents." The agency included a chart showing that incidents resulting in death or serious injury declined more than 60 percent during that period even as the number of miles of pipeline increased almost 40 percent. Other PHMSA data show modest declines in the number of serious incidents, injuries and fatalities in recent years.

"PHMSA is moving in the right direction," said Ravindra Chhatre, an investigator at the National Transportation Safety Board [8] who specializes in pipeline accidents. "Sometimes people get frustrated by the pace that it's moving, but definitely it's improving."

Congress Delays Action on Shutoff Valves Even After Inferno Kills Eight

The problem, Wiese said in New Orleans, is that it takes too long to issue regulations, in part because industry negotiates for the weakest possible rules.

"Getting any change through regulation, which used to be a viable tool, is no longer viable," Wiese told the industry representatives. "I really don't see that as a way to get change. It moves so slow. I've been working on rules now for recommendations from our friends at (the National Transportation Safety Board) and U.S. Congress. I've been working very hard but with the resources we have I still can't get those rules out."

To Rep. Jackie Speier, D-Calif., whose district includes the site of one the deadliest pipeline accidents in American history, Wiese's comments were surprising only because they were delivered in public.

"To me, he was refreshingly candid," she said. "The industry has a lock on PHMSA. It has a lock on Congress. And the public's interest gets dramatically watered down."

Speier began having doubts about PHMSA after a 30-inch section of pipe ruptured in San Bruno at 6:11 p.m. on Sept. 9, 2010. The explosion generated a giant fireball that went on for 95 minutes because it took that long for gas line operator Pacific Gas & Electric to reach the manual shutoff valves.

The pipe had been installed in 1956 and was substandard and poorly welded, a National Transportation Safety Board (NTSB) investigation found later. Because it was grandfathered

under PHMSA's safety laws, it wasn't subjected to the pressure testing that newer pipes must undergo.

The NTSB's investigation also found widespread failures of PG&E's operations, maintenance, record-keeping systems and emergency response. It issued a total of 39 recommendations, including 13 to PHMSA. As the third anniversary of the explosion approaches, PHMSA has yet to finish implementing any of the recommendations, according to the NTSB.

One of those recommendations was for remote shutoff valves to be installed on energy pipelines near suburbs, dams or other areas where an explosion would have grave consequences. Safety advocates had been arguing for remote or automatic safety valves since the 1970s, but the oil and gas industry always objected, saying the cost was too high and false alarms could shut down a pipeline, disrupting the flow of oil or gas.

On the first anniversary of the tragedy that rocked her district, Speier introduced legislation designed to implement many of the NTSB recommendations, including the call for remote shutoff valves.

But the law President Obama signed several weeks later was a compromise bill—the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011. It was praised in its final form by the American Petroleum Institute, the Interstate Natural Gas Association of America and other industry groups. It was far weaker than Speier's legislation, especially when it came to the remote shutoff valves that might have reduced the death and destruction in San Bruno.

Instead of requiring operators to install the valves quickly, the act directs PHMSA to spend a year studying the mechanics and costs of such a rule and then spend another year deliberating the implications. It also stipulates that PHMSA may not proceed down the road toward regulations—a process that typically takes 18 months to three years—until it first determines that remote shutoff valves are economically feasible for the industry. Even then, the new rule could be applied only to pipelines laid in the future.

"Laughable," Speier said of the provision in a recent interview. Industry, which has argued for decades that remote shutoff valves are too costly, will no doubt continue to do so, she said.

Non-Industry Groups Find PHMSA Less Accessible

In addition to Wiese, PHMSA sent at least three officials to address the safety conference at the Royal Sonesta Hotel in New Orleans. Two former PHMSA officials who left the agency to work as industry consultants also addressed the group of 300 to 400 oil and gas pipeline operators. Throughout the week, the Louisiana Gas Association [9] operated a hospitality suite overlooking Bourbon Street, where regulators and industry representatives gathered each evening to sip libations and drop beads to passersby.

Speaking just before Wiese, Bob Kipp, president of the Common Ground Alliance [10], an industry-backed safety group, drew on Sun Tzu's classic treatise, *Art of War*, in urging the crowd

to "keep your friends close and your regulators closer." The comment drew chuckles from the audience.

Groups outside the industry have found PHMSA far less accessible.

In preparing for a recent trip to Washington, a delegation organized by the National Wildlife Federation [11] tried to set up appointments with the State Department, the Environmental Protection Agency and PHMSA to discuss pipeline safety. While the delegation was welcomed by the State Department and the EPA, a PHMSA official denied the request without explanation.

To Beth Wallace, the federation's community outreach coordinator for the Great Lakes Regional Center, it was typical of the brushoffs environmental groups get from PHMSA. "It seems that the agency always gives an ear to the industry," she said. "But when it comes to public participation, there doesn't seem to be that same level of access."

PHMSA spokesman Hill said agency officials had met with the National Wildlife Federation in May and didn't feel another meeting was necessary.

In New Orleans, Wiese said "an under-informed populace highly dependent on fossil fuels" is prone to negative perceptions of the industry. He said that penchant is exacerbated by a press corps that doesn't "have time to fully understand the story" and has instead served as a vehicle for "gang warfare" through its coverage of events like the March 29th rupture of ExxonMobil's Pegasus pipeline in Mayflower, Ark.

Congress, Wiese contended, hasn't done much to help.

"It's very political in Washington. Nobody wants to try to figure out what's the best thing to do. They're thinking about what's the most advantageous position to take," he said, later adding that he'd recently had an unpleasant meeting with a "very hot" congressional delegation about the Pegasus spill in Arkansas.

Rep. Tim Griffin, R-Ark., a member of the delegation Wiese was referring to, has criticized the operations and maintenance of the pipeline and PHMSA's lack of transparency.

"If public officials and Arkansans would have known then what we know now, changes to the operation of the pipeline may have been demanded years ago," he said.

InsideClimate News reporter David Hasemyer contributed to this report.

http://insideclimatenews.org/news/20130911/exclusive-pipeline-safety-chief-says-his-regulatory-process-kind-dying

COMPANIES/ORGANIZATIONS COMMENTS

CO69 – Preservation Piedmont

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

April 5, 2017

Re: Atlantic Coast Pipeline Docket Number CP15-554-000

Dear Ms. Bose,

Preservation Piedmont, a 501(c)3 organization located in Charlottesville, Virginia and whose mission is to preserve and advocate for historic resources in Central Virginia, is writing to encourage FERC and the Atlantic Coast Pipeline (ACP) to

CO69-1 • make every attempt to reroute the pipeline so that it does not impact the rural historic districts in Virginia,

• reconsider the location of the compressor station proposed to be located in the Union Hill/Woods Corner area that is currently under review as an eligible district for the National Register of Historic Places because we believe that there are alternative locations that Dominion has not identified and explored to avoid adverse harmful effects on this significant area of concentrations of African American historic resources, and

CO69-2 • respond to concerns about impacts to the scenic vistas, viewsheds, and the associated heritage tourism industry during and after the pipeline's construction.

Significance. The Union Hill/Woods Corner is a rural community, the majority of whom are descendants of formerly enslaved people, who established their own rural, agricultural community in this area and developed churches, schools, dwellings, stores, family burial sites and cemeteries set amongst their family-owned farms, orchards and ranches. These types of resources are significant but heretofore have been under-represented in Virginia's historic surveys and National Register nominations. Today, there is growing interest and awareness of the importance of such resources and their ability to provide invaluable information about rural communities where the ancestors of current property owners and residents were once enslaved.

Our statewide historic preservation organization Preservation Virginia consistently has named such resources to its annual most endangered list, and is undertaking significant initiatives to document and preserve such resources for future generations.

CO69-3 **DEIS.** FERC's Draft Environmental Impact Statement (DEIS) ignores the proposed Union Hill/Woods Corner Historic District, and to date has not included cultural resource information about this area. In fact, there are no reports with information on the archaeological or architectural survey results for most of Buckingham County.

Research and fieldwork is needed for the area of the compressor station site in the Union Hill/Woods Corner Historic District, including the survey and research of extant buildings, archaeological sites, cemeteries, transportation routes and viewsheds within the larger cultural landscape. There are quite a large number of cemeteries within and in close proximity to the Union

CO69-1 Comment noted.

CO69-2 Section 4.8.8 describes the impacts on visual resources resulting from construction and operation of the project. Sections 4.9.5 and 4.10.1.1 describe impacts on tourism and heritage sites, respectively.

CO69-3 See the response to comment CO49-1.

CO69-3 (cont'd) Hill/Woods Corner Rural Historic District that need to be documented and avoided (reference Charles White's publications and the map of African-American cemeteries in the area).

CO69-4 **Omissions.** The DEIS acknowledges that a number of known historic sites in area of potential effect have not been adequately investigated. All site investigations need to be completed and the reports submitted before full comments can be made on the DEIS.

We understand that additional reports on the natural and cultural resources potentially impacted by the ACP have been completed but were not included in the DEIS. All of these additional reports need to be submitted as an addendum or as a new DEIS before full comments can be made on the DEIS.

Additional Points

CO69-5 **Yogaville**. Yogaville is not included in the environmental review process and the impacts on the Yogaville Historic District's historic, scenic, and natural resources have not been considered in the

CO69-6 DEIS. We request that FERC investigate the effects of flooding and erosion near the pipeline under the James River on SAYVA's James River floodplain where the LOTUS temple stands.

CO69-7 **Seismic Planning.** We request FERC create a plan to ensure structures in Buckingham County are seismically-sound buildings in a county with over 125 years of recorded earthquakes (as the U.S. Forest Service responded to FERC).

I hope that our voice will be heard and urge FERC to take the necessary steps to consider historic resources through project planning and reviews that acknowledge and avoid effects on significant historic resources.

Very truly yours,

Emma Earnst
President, Preservation Piedmont

CO69-4 Comment noted.

CO69-5 The analysis of NRHP-related impacts on the Yogaville historic district has not been completed. The VDHR is consulting with interested parties regarding this property, as discussed in section 4.10.1.1.

CO69-6 We have taken flooding into our consideration.

CO69-7 We assume the comment is in regard to project-related structures. Federal pipeline safety regulations in 49 CFR 192 require companies to design pipelines to withstand the anticipated external pressures and loads that will be imposed on the pipe after installation, including pressures and loads from anticipated seismic activity (e.g., earthquakes).

COMPANIES/ORGANIZATIONS COMMENTS

CO70 – Rockfish Valley Foundation and Wintergreen Country Store Land Trust

THE LAST WORD from the Rockfish Valley Foundation (RVF) AND Wintergreen Country Store Land Trust challenge FERC to find any place along the entire proposed pipeline where the impact on culture, history and environments is more significant. PLEASE take a look.

You must know that this point of crossing should be studied by FERC commissioners in detail. We have provided first our own knowledge and opinion and now all of our concerns have been confirmed by Dominion's Survey and the piece of route here is a disaster. It would be as a result appropriate for RVF to build a Museum complex and present the tragedy and travesty of this project thru Nelson County. Should that cost not be considered as damages that should be awarded in an eminent domain suit.

Dominion has surveyed and it is now even clearer that the Rt 151 Crossing thru the cultural and historic resources along The Coleman Mill and Old Wintergreen Village is the worse possible crossing in the Rockfish Valley. There are no good crossing points in the valley but this is the worse. Dominion moved the line from Bold Rock cider to avoid a sycamore tree and as a consequence ruin the local area. There is no other place in the State with the layers of history and culture stacked one on the other more than at this crossing point of RT 151, the Rockfish Valley Highway.

CO70-1 Nelson RT 151 is a Virginia Scenic Byway. That is really important as it leads to the Nelson Scenic Loop over 4 scenic byways a distance of 50 miles. That starts at the adjoining Rockfish Valley Foundation Natural History Center.The work spaces outlined by Dominion/ACP are 50 feet wide by a depth that looks to be over 150 feet. They run along an area that drops from the pavement 12-15 feet to the waterway, flood planes, historic Coleman Mills pond and mill trace. By all measures this impacts and would destroy Spruce Creek Bridge. No one has contradicted this even though many at Dominon have been asked. Approval means that there will not be the normal 125 foot swath clear cut but the extra 50 feet on each side. That is 225 feet wide and an unknown depth. That takes you through beautiful forest as well and knocks out the most significant element of the scenic byway with the exception of the 360 mountain view a quarter of a mile soutoh. Somehow it will be used to install the 42 inch pipe there is no stated plan. US ARMY CORP has visited and found resources they must study. This will never be the same. Will FERC require a crossing plan here?

Recently USDA/NRCS has awarded a grant to RVF to improve the flora and fauna of the area and contractors are giving estimates for that. Likewise the Commonwealth of Virginia has awarded the status of Virginia Treasure to the area on 4 resources: a butterfly trail, the Coleman Mills and Old Wintergreen Village and South Rockfish Valley Rural Historic District. There is no other place in the Commonwealth of Virginia so recognized. Our plan was to undertake a Phase I archeology study with rivanna

CO70-2 Archeology. When will Dominon be required to do this. Kevin Bowman said it will be required. But when?

CO70-3 Dominion did its surrey on March 17. Their consultants discovered and supposedly reported a continuous boundary of red maples and identified the area as a wetland forest.

CO70-1 Section 4.8.8.2 discusses impacts on scenic byways resulting from construction and operation of the project and includes a recommendation for Atlantic to file site-specific crossing plans at designated scenic byways prior to construction.

CO70-2 As described in section 4.10, the section 106 process of identifying, evaluating, assessing, and mitigating adverse effects to historic properties is ongoing. Cultural resources surveys for the project are being conducted according to federal standards and state guidelines.

CO70-3 Comment noted.

COMPANIES/ORGANIZATIONS COMMENTS

CO70 – Rockfish Valley Foundation and Wintergreen Country Store Land Trust (cont'd)

CO70-4 IN the field adjacent, they identified Native American material and supposedly reported that. Does this not mean the route must be relocated? Is it just a question of screwing up the environment and cultural resources and doing some mitigation elsewhere? It appears that they can move the pipeline a few hundred feet and avoid the wetland but would still have to study the Native American issue. It has been stated that this area is a Native American woodland village site. What would that mean. Move the pipeline?

CO70-5 NO SERIOUS EFFORT HAS BEEN MADE BY DOMINION TO FIND ANOTHER CROSSING POINT. FERC SHOULD REQUIRE THAT. WHEN DOMINION MISTAKENLY PUT FORWARD A ROUTE THROUGH A CONSERVATION EASEMENT DOWN THE ROAD . EVERYONE REALIZED IT WAS NOT IN GOOD FAITH; BUT NO ONE HAS SAID FIND AN ALTERNATIVE. FERC SHOULD REQUIRE PHASE I ARCHEOLOGY STUDIES. THERE IS NO ONE WHO SUGGESTS THAT THERE BE UNNECESSARY AND SIGNIFICANT DAMAGE TO THE ENVIRONMENT AND CULTURE AND HISTORY OF A PLACE ALONG THE PROPSED PIPELINE. THIS IS THE MOST DRAMATIC POINT WHERE IT IS OBVIOUS AN ERROR IS BEING MADE. **FERC SHOULD DENY THIS SECTION OF ROUTE. FORCE DOMINION TO FIND A ROUTE THAT WORKS. THIS ONE SHOULD BE DENIED.**

April 5, 2017
Rockfish Valley Foundation
Wintergreen Country Store Land Trust
1368 Rockfish Valley Highway
Nellysford Virginia

CO70-4 See the response to comment CO70-2.

CO70-5 Comment noted.

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy

WESTMORELAND CONSERVANCY

April 4, 2017

Kimberly D. Bowes, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Re: Atlantic Coast Pipeline, LLC, Dominion Transmission, Inc. and
Piedmont Natural Gas Company, Inc.
Atlantic Coast Pipeline Supply Header Project and Atlantic-Piedmont
Capacity Lease Project
Docket Nos. CP15-554-000, CP15-554-001, CP15-555-000 and CP15-556-000
OEP/DPC/CB-2
§375.308(x)(3)

Dear Secretary Bose:

Please be advised I am President of the Westmoreland Conservancy ("Conservancy"), a non-profit corporation doing business in the geographical area of Westmoreland County, Pennsylvania, but primarily, in the Municipality of Murrysville. The mission statement for the Conservancy is to acquire lands that conserve the rural and rustic nature of Western Pennsylvania. It may also partner with other entities to achieve this goal.

The Supply Header Project, CP15-555-001 affects lands owned by the Conservancy lying and situate in the Municipality of Murrysville, County of Westmoreland and Commonwealth of Pennsylvania. The lands were acquired by the Conservancy by two Deeds that are recorded in the Recorder of Deeds' Office in and for Westmoreland County, Pennsylvania as Instrument Nos. 200903040006936 and 200903040006939. Copies of the Deeds are attached hereto as Exhibits "1" and "2" respectively. These lands are further shown on the Jane E. Caywood Plan of Lots which is also recorded in the Recorder's Office as Instrument No. 200901220001968. The lands consist of two separate lots, Lot 2 being 2.3966 acres and Lot 3 being 5.3475 acres. Attached hereto as Exhibit "3" is a true and correct copy of the Jane E. Caywood Plan, which also has noted thereon the "Dominion underground gas lines." This is the current location of the existing gas line right-of-way owned by Dominion which the Supply Header Project generally intends to expand. Specifically, the portion of the project that impacts the lands of the Conservancy is known as the TL-636 Supply Loop very near the Tonkins Compressor Station as

Protecting Nature's home, enriching yours.

Z-1146

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)

shown on Exhibit "4" which can also be found in the Draft Environmental Impact Statement ("DEIS") Volume II, Part 4, Appendix B at page B-176.

The existing Dominion pipeline on the lands of the Conservancy follows a route to the north approaching the Tomkins Compressor Station that minimally affects the lands of the Conservancy as said line parallels in large part the eastside of Hills Church Road before crossing Hills Church Road at the extreme northeastern corner of Lot 3 onto the lands of Dominion upon which the Tomkins Compressor Station is situate. However, the expansion project pipeline contemplated by Dominion intends to substantially deviate from running parallel to and adjacent to the existing line. Rather than continuing to parallel the existing line, the proposed expansion follows a route that is to the west of the existing line, and as proceeding north, makes a sharp turn to the west across Hills Church Road into and bisecting Lot 3 as shown on Exhibits "4" and "5."

CO71-1 Dominion's proposed route significantly and adversely impacts the lands of the Conservancy in that there exists thereon an undisturbed, unpolluted, unnamed tributary to Haymaker Run, which contains significant aquatic life as designated in the DEIS, Volume 3, Part 1 on Appendix K-2, a true and correct copy of which is attached hereto as Exhibit "6."

CO71-2 Furthermore, in addition to the tributary, the area to be impacted is predominantly a mature hardwood forest as evidenced in the DEIS, Volume 2, Part 4, Table E-1, page 62 (35-011-AR01), which the construction of the pipeline expansion as proposed will destroy. Please see Table E-1 attached hereto as Exhibit "7."

CO71-3 Finally, while the parcels of land owned by the Conservancy that will be impacted by this Project as proposed comprise approximately eight (8) acres, there exists thereon walking and hiking trails that connect another five (5) to six (6) miles of walking and hiking trails owned, operated and maintained by the Conservancy in connection with other land holdings and landowner arrangements. Also of significance is that the mature hardwood forest on the property presents a significant nesting area for various birds and mammals, not the least of which is or may be the Indiana bat. Again, if Dominion's proposed route is approved by the Commission, these habitat areas and recreational facilities will be destroyed.

Dominion and the Conservancy have been in conversation regarding alternatives. The Conservancy has expressed to Dominion the above-stated concerns, and to Dominion's credit, an alternate route is being explored, but not yet finalized. Dominion's proposed alternate route is to expand the pipeline immediately contiguous to the existing pipeline on the eastside thereof continuing north along the eastside of Hills Church Road until the same is equal to the property of Dominion at the location of Tomkins Compressor Station, at which time the pipeline would make a 90° left turn to the west under Hills Church Road to the property of Dominion. A true and correct copy of the proposed alternate route is attached hereto as Exhibit "8." The advantage of this route would be to entirely eliminate the above-described impact to the Conservancy property, as this route is through previously-disturbed land along the existing pipeline and Hills Church Road.

CO71-1 Section 3.4.2 has been added to the final EIS to analyze a potential route alternative through this area. We conclude in this section that the variation appears to minimize crossing of conservation lands and eliminate waterbody and wetland impacts; however, we do not have field and civil survey information to fully evaluate the feasibility of the variation or determine whether the variation offers advantages that are environmentally significant. As such, we recommend that prior to construction, DETI should file environmental, cultural, and landowner information (as outlined in recommended Environmental Condition No. 5) regarding the limitations of or ability to incorporate the Westmoreland Conservation Variation into SHP.

CO71-2 See the response to comment CO71-1.

CO71-3 Section 4.8.5.1 has been updated to discuss the Westmoreland Conservancy lands crossed. See also the response to comment CO71-1.

CO71-3 (cont'd)

As indicated, unfortunately, Dominion has not been able to finalize the alternate route prior to the time deadline for submitting this environmental impact comment. The Conservancy respectfully hopes and requests that the concerns as set forth in this correspondence along with the information gleaned from the various Exhibits would convince the Commission to require Dominion to install the pipeline in the location as set forth on Dominion's proposed alternate route.

If you have any questions, you may contact me at shellytichy@comcast.net or at 724-325-5523.

Your considerations are greatly appreciated. Please understand that the Conservancy is not opposed to the Project but only that the proposed initial route of the pipeline expansion in this specific area be altered due to the adverse impact on the environment, habitat and recreational uses.

Very truly yours,

Shelly Tichy
President of the Westmoreland Conservancy

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)

Instr:200903040006935 03/04/2009
P:1 of 5 F:$63.00 12:11PM
Tom Murphy T20090014195
Westmoreland County RecorderC

I hereby CERTIFY that this document is recorded in the RECORDER'S OFFICE of Westmoreland County Pennsylvania
Tom Murphy
Tom Murphy • Recorder of Deeds

This Indenture

Made the 16th day of February, 2009,

Between

TERRY L. CAYWOOD and ELIZABETH A. CAYWOOD, his wife, and JANICE E. CAYWOOD BEAUREGARD, and WILLIAM C. BEAUREGARD, her husband,

Parties of the First Part; and

And

WESTMORELAND CONSERVANCY, a Pennsylvania non-profit corporation, having its principal office in the Municipality of Murrysville, County of Westmoreland and State of Pennsylvania,

Party of the Second Part:

Witnesseth, *that the said Parties of the First Part, in consideration of the sum of* One Dollar ($1.00) *to them now paid by the said Party of the Second Part, do grant, bargain, sell and convey unto the said Party of the Second Part, its successors and assigns,*

ALL that certain lot or piece of land situate in the Municipality of Murrysville, County of Westmoreland and Commonwealth of

UPI 49-01048-00000
MAP 49 7 00 07

New UPI 49-10128-00000

1

EXHIBIT "1"

Z-1149

Pennsylvania, being Lot No. 3 in The Jane E. Caywood Plan, recorded in the Recorder's Office of Westmoreland County, Instrument No. 200901220001968.

SUBJECT to coal and mining rights and oil and gas rights heretofore granted, excepted or reserved in prior instruments of record.

SUBJECT to rights of way for pipe lines and pole lines, as the same appear of record and as the same are now located.

BEING the same property which Terry L. Caywood and Janice E. Caywood Beauregard, Executors under the Last Will and Testament of Jane M. Caywood, Deceased, conveyed to Terry L. Caywood and Janice E. Caywood Beauregard by Deed dated February 16, 2009, and to be recorded. 200903050006935

SUBJECT to the restriction that no hunting of birds, animals or game shall be permitted on said premises and that said tract of land shall never be used for a housing plan or a housing development of any type.

BEING designated as part of Tax Map No. 49-07-00-0-067.

with the appurtenances: **To Have and To Hold** *the same unto and for the use of the said Party of the Second Part, its successors and assigns forever, and the said Parties of the First Part for themselves, their heirs, executors and administrators covenant with the said Party of the Second Part, its successors and assigns against all lawful claimants the same and every part thereof to Warrant and Defend.*

NOTICE - THIS DOCUMENT MAY NOT/DOES NOT SELL, CONVEY, TRANSFER, INCLUDE OR INSURE THE TITLE TO THE COAL AND RIGHT OF SUPPORT UNDERNEATH THE SURFACE LAND DESCRIBED OR REFERRED TO

Instr:200903050006935 03/04/2009
P:2 of 6 F:$63.00 12:11PM
Tom Murphy T20090014195
Westmoreland County Recorder

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)

Instr:200903040086936 03/04/2009
P 3 of 6 F:$63.00 12:11PM
Tom Murphy T20090014195
Westmoreland County Recorder

HEREIN, AND THE OWNER OR OWNERS OF SUCH COAL MAY HAVE/HAVE THE COMPLETE LEGAL RIGHT TO REMOVE ALL OF SUCH COAL AND, IN THAT CONNECTION, DAMAGE MAY RESULT TO THE SURFACE OF THE LAND AND ANY HOUSE, BUILDING OR OTHER STRUCTURE ON OR IN SUCH LAND. THE INCLUSION OF THIS NOTICE DOES NOT ENLARGE, RESTRICT OR MODIFY ANY LEGAL RIGHTS OR ESTATES OTHERWISE CREATED, TRANSFERRED, EXCEPTED OR RESERVED BY THIS INSTRUMENT. [This notice is set forth in the manner provided in Section 1 of the Act of July 17, 1957, P.L. 984, as amended, and is not intended as notice of unrecorded instruments, if any.]

Witness *the hand and seal of the said Parties of the First Part.*

Witness:

Terry L. Caywood (Seal)

Elizabeth A. Caywood (Seal)

Janice E. Caywood Beauregard (Seal)

William C. Beauregard (Seal)

NOTICE THE UNDERSIGNED, AS EVIDENCED BY THE SIGNATURE(S) TO THIS NOTICE AND THE ACCEPTANCE AND RECORDING OF THIS DEED, (IS, ARE) FULLY COGNIZANT OF THE FACT THAT THE UNDERSIGNED MAY NOT BE OBTAINING THE RIGHT OF PROTECTION AGAINST SUBSIDENCE, AS TO THE PROPERTY HEREIN CONVEYED, RESULTING FROM COAL MINING OPERATIONS AND THAT THE PURCHASED PROPERTY, HEREIN CONVEYED, MAY BE PROTECTED FROM DAMAGE DUE TO MINE SUBSIDENCE BY A PRIVATE CONTRACT WITH THE OWNERS OF THE ECONOMIC INTEREST IN THE COAL. THIS NOTICE IS INSERTED HEREIN TO COMPLY WITH THE BITUMINOUS MINE SUBSIDENCE AND LAND CONSERVATION ACT OF 1966, AS AMENDED 1980, OCT. 10, P.L. 874, NO. 156 § 1.

WITNESS:

WESTMORELAND CONSERVANCY

By:

3

Commonwealth of Pennsylvania }
County of Westmoreland } SS:

On this the 16th *day of* February, 2009, *before me, a Notary Public, the undersigned officer, personally appeared* TERRY L. CAYWOOD, and ELIZABETH A. CAYWOOD, his wife, *known to me (or satisfactorily proven) to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same for the purposes therein contained.*

In Witness Whereof, *I hereunto set my hand and official seal.*

Elizabeth A Bailey
Notary Public

My Commission Expires:

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Elizabeth Bailey, Notary Public
Murrysville Boro, Westmoreland County
My Commission Expires July 1, 2012
Member, Pennsylvania Association of Notaries

4

Z-1152

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)

Instr:200903040006935 03/04/2009
P:5 of 6 F:$53.00 12:11PM
Tom Murphy T20090014195
Westmoreland County RecorderC

State of New Hampshire
County of Hillsborough } ss:

On this the 18th *day of* February, 2009, *before me, a Notary Public, the undersigned officer, personally appeared* JANICE E. CAYWOOD BEAUREGARD, and WILLIAM C. BEAUREGARD, her husband, *known to me (or satisfactorily proven) to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same for the purposes therein contained.*

In Witness Whereof, *I hereunto set my hand and official seal.*

Notary Public

My Commission Expires:

MEGHAN A. MUSSAW, Notary Public
My Commission Expires September 3, 2013

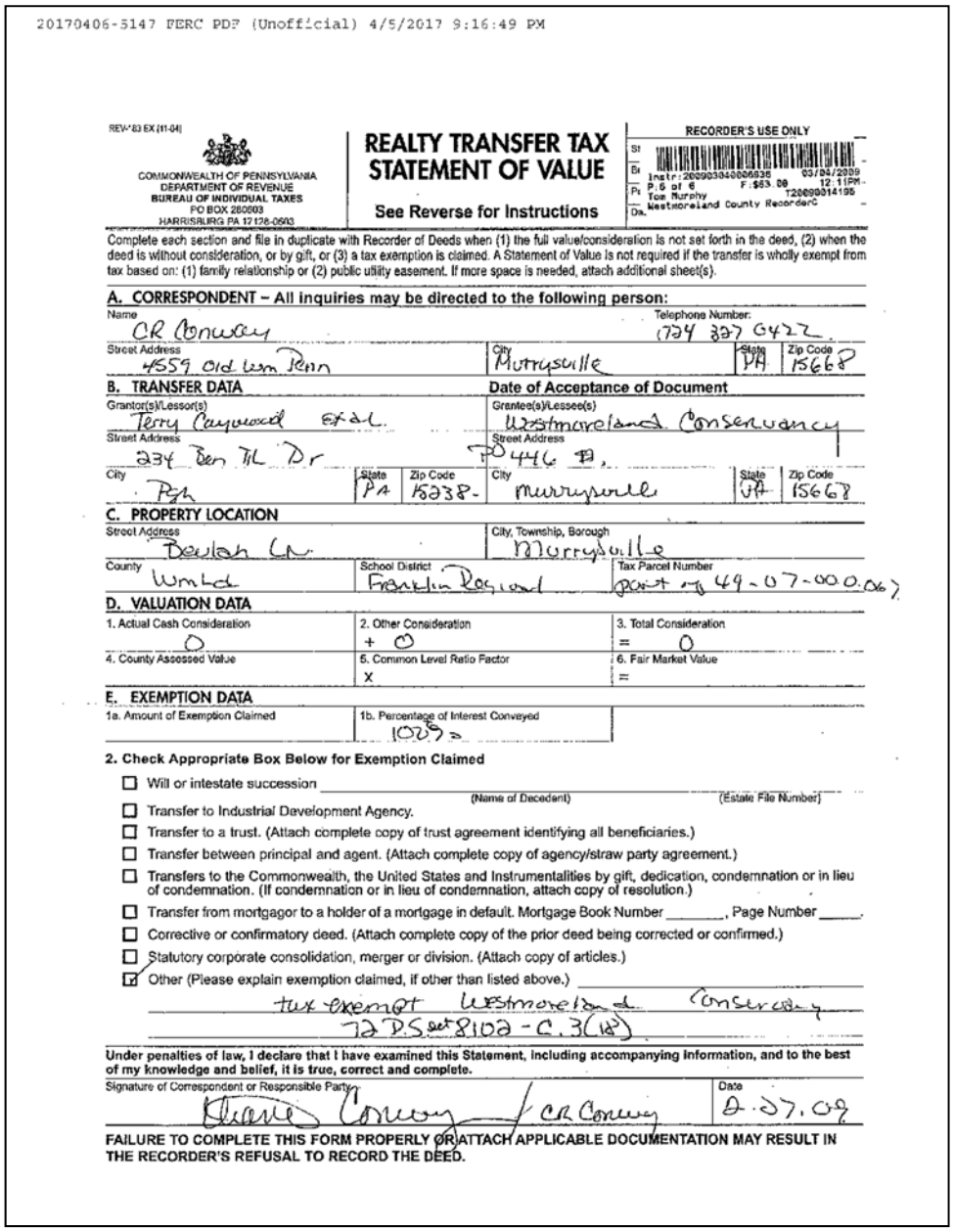
Grantee's precise residence is: P.O. Box 446, Murrysville PA 15668

5

Z-1153

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)



20170406-5147 FERC PDF (Unofficial) 4/5/2017 9:16:49 PM

REV-183 EX (11-04)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF REVENUE
BUREAU OF INDIVIDUAL TAXES
PO BOX 280603
HARRISBURG PA 17128-0603

REALTY TRANSFER TAX STATEMENT OF VALUE

See Reverse for Instructions

RECORDER'S USE ONLY

St.
Bk. Instr: 200903040006935 03/04/2009
Pg. P:6 of 6 F:$53.00 12:11PM
Tom Murphy 1200903014195
Da. Westmoreland County RecorderC

Complete each section and file in duplicate with Recorder of Deeds when (1) the full value/consideration is not set forth in the deed, (2) when the deed is without consideration, or by gift, or (3) a tax exemption is claimed. A Statement of Value is not required if the transfer is wholly exempt from tax based on: (1) family relationship or (2) public utility easement. If more space is needed, attach additional sheet(s).

A. CORRESPONDENT – All inquiries may be directed to the following person:

Name	Telephone Number:
CR Conway	(724 327 6422
Street Address	**City** / **State** / **Zip Code**
4559 Old Lem Penn	Murrysville PA 15668

B. TRANSFER DATA — **Date of Acceptance of Document**

Grantor(s)/Lessor(s)	Grantee(s)/Lessees(s)
Terry Caywood et al	Westmoreland Conservancy
Street Address: 234 Ben Til Dr	Street Address: PO 446 #,
City / State / Zip Code: Pgh PA 15238-	City / State / Zip Code: Murrysville PA 15668

C. PROPERTY LOCATION

Street Address	City, Township, Borough
Beulah Ln.	Murrysville
County	**School District** / **Tax Parcel Number**
Wmld	Franklin Regional (Part of 49-07-000.06)

D. VALUATION DATA

1. Actual Cash Consideration	2. Other Consideration	3. Total Consideration
0	+ 0	= 0
4. County Assessed Value	**5. Common Level Ratio Factor**	**6. Fair Market Value**
	X	=

E. EXEMPTION DATA

1a. Amount of Exemption Claimed	1b. Percentage of Interest Conveyed
	1029 =

2. Check Appropriate Box Below for Exemption Claimed

- ☐ Will or intestate succession _____ (Name of Decedent) (Estate File Number)
- ☐ Transfer to Industrial Development Agency.
- ☐ Transfer to a trust. (Attach complete copy of trust agreement identifying all beneficiaries.)
- ☐ Transfer between principal and agent. (Attach complete copy of agency/straw party agreement.)
- ☐ Transfers to the Commonwealth, the United States and Instrumentalities by gift, dedication, condemnation or in lieu of condemnation. (If condemnation or in lieu of condemnation, attach copy of resolution.)
- ☐ Transfer from mortgagor to a holder of a mortgage in default. Mortgage Book Number _____, Page Number _____.
- ☐ Corrective or confirmatory deed. (Attach complete copy of the prior deed being corrected or confirmed.)
- ☐ Statutory corporate consolidation, merger or division. (Attach copy of articles.)
- ☑ Other (Please explain exemption claimed, if other than listed above.) tax exempt Westmoreland Conservancy 72 P.S. Sect 8102 - C.3(iv)

Under penalties of law, I declare that I have examined this Statement, including accompanying information, and to the best of my knowledge and belief, it is true, correct and complete.

Signature of Correspondent or Responsible Party	Date
CR Conway	2.27.09

FAILURE TO COMPLETE THIS FORM PROPERLY OR ATTACH APPLICABLE DOCUMENTATION MAY RESULT IN THE RECORDER'S REFUSAL TO RECORD THE DEED.

Z-1154

This Indenture

Made the 16th day of February, 2009,

Between TERRY L. CAYWOOD and JANICE E. CAYWOOD BEAUREGARD, Executors under the Last Will and Testament of JANE M. CAYWOOD, Deceased, late of the Municipality of Murrysville, County of Westmoreland and State of Pennsylvania,

Parties of the First Part,

A
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D

WESTMORELAND CONSERVANCY, a Pennsylvania non-profit corporation, having its principal office in the Municipality of Murrysville, County of Westmoreland and State of Pennsylvania,

Party of the Second Part,

WHEREAS, Jane M. Caywood, died testate on April 13, 2005; and

WHEREAS, on April 28, 2005, Letters Testamentary in the Estate of Jane M. Caywood, Deceased, were granted to Terry L. Caywood and Janice E. Caywood Beauregard, Executors, by the Register of Wills of Westmoreland County, Pennsylvania, at No. 65-05-00853;

UPI 49-01048-00000 UPI 49-10129-00000

EXHIBIT "2"

Now this Indenture Witnesseth, *That the said Parties of the First Part, for and in consideration of the sum of* Twenty-Five Thousand Dollars ($25,000.00) *lawful money of the United States, to them in hand paid by the said Party of the Second Part, at or before the sealing and delivery hereof, the receipt whereof is hereby acknowledged, has granted, bargained, sold, aliened, released and confirmed, and by these presents does grant bargain, sell, alien, release and confirm unto the said Party of the Second Part, its successors and assigns, the following described property:*

ALL that certain lot or piece of land situate in the Municipality of Murrysville, County of Westmoreland and Commonwealth of Pennsylvania, being Lot No. 2 in The Jane E. Caywood Plan, recorded in the Recorder's Office of Westmoreland County, Instrument No. 200901220001968.

SUBJECT to coal and mining rights and oil and gas rights heretofore granted, excepted or reserved in prior instruments of record.

SUBJECT to rights of way for pipe lines and pole lines, as the same appear of record and as the same are now located.

BEING part of the same property which Daniel T. Mistick et ux conveyed to William P. Caywood, Jr. and Jane E. Caywood, his wife, by Deed dated August 24, 1961, recorded in the Recorder's Office of Westmoreland County, Deed Book Volume 1819, page 847.

The said William P. Caywood, Jr. died August 23, 1981, and title to said property vested thereby in Jane E. Caywood, also known as Jane M. Caywood, his wife, as surviving tenant by the entireties.

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P:3 of 7 F:$54.50 12:19PM
Tom Murphy T200900144195
Westmoreland County RecorderC

EXCEPTING and RESERVING unto the Estate of Jane M. Caywood, Deceased, the right to use Beulah Lane for purposes of ingress, egress and regress, and utilities in common with the Westmoreland Conservancy and others.

SUBJECT to the restriction that no hunting of birds, animals or game shall be permitted on said premises and that said tract of land shall never be used for a housing plan or a housing development of any type.

BEING designated as part of Tax Map No. 49-07-00-0-067.

Together *with all and singular ways, waters, water courses, rights, liberties, privileges, hereditaments and appurtenances whatsoever thereunto belonging, or in anywise appertaining, and the reversions and remainders, rents, issues and profits thereof; and also all the estate, right, title, interest, use, trust, property, possession, claim and demand whatsoever in law, equity or otherwise, howsoever, of, in, to or out of the same:*

To Have and to Hold *the said hereditaments and premises hereby granted and released, or mentioned and intended so to be, with the appurtenances, unto the said Party of the Second Part, its successors and assigns, to and for the only proper use and behoof of the said Party of the Second Part, its successors or assigns, forever,*

And the said Parties of the First Part covenant, promise and agree, to and with the said Party of the Second Part, its successors and assigns, by these presents, that they the said Parties of the First Part have not done, committed, or knowingly, or willingly suffered to be done or committed, any act, matter or thing whatsoever whereby the premises hereby granted, or any part thereof, is, are, shall or may be impeached, charged or incumbered, in title, charge, estate or otherwise howsoever.

NOTICE - THIS DOCUMENT MAY NOT/DOES NOT SELL, CONVEY, TRANSFER, INCLUDE OR INSURE THE TITLE TO THE COAL AND RIGHT OF SUPPORT UNDERNEATH THE SURFACE LAND DESCRIBED OR REFERRED TO HEREIN, AND THE OWNER OR OWNERS OF SUCH COAL MAY HAVE/HAVE THE COMPLETE LEGAL RIGHT TO REMOVE ALL OF SUCH COAL AND, IN THAT CONNECTION, DAMAGE MAY RESULT TO THE

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)

Instr:200903040006939 03/04/2009
P:4 of 7 F:$64.50 12:16PM
Tom Murphy T20090014195
Westmoreland County RecorderC

SURFACE OF THE LAND AND ANY HOUSE, BUILDING OR OTHER STRUCTURE ON OR IN SUCH LAND. THE INCLUSION OF THIS NOTICE DOES NOT ENLARGE, RESTRICT OR MODIFY ANY LEGAL RIGHTS OR ESTATES OTHERWISE CREATED, TRANSFERRED, EXCEPTED OR RESERVED BY THIS INSTRUMENT. [This notice is set forth in the manner provided in Section 1 of the Act of July 17, 1957, P.L. 984, as amended, and is not intended as notice of unrecorded instruments, if any.]

In Witness Whereof, *the said Parties of the First Part hereunto set their hands and seals the day and year first above written.*

Sealed and Delivered in the presence of:

(Seal)
Terry L. Caywood, Executor under the Last Will and Testament of Jane M. Caywood, Deceased

(Seal)
Janice E. Caywood Beauregard, Executor under the Last Will and Testament of Jane M. Caywood, Deceased

NOTICE THE UNDERSIGNED, AS EVIDENCED BY THE SIGNATURE(S) TO THIS NOTICE AND THE ACCEPTANCE AND RECORDING OF THIS DEED, (IS, ARE) FULLY COGNIZANT OF THE FACT THAT THE UNDERSIGNED MAY NOT BE OBTAINING THE RIGHT OF PROTECTION AGAINST SUBSIDENCE, AS TO THE PROPERTY HEREIN CONVEYED, RESULTING FROM COAL MINING OPERATIONS AND THAT THE PURCHASED PROPERTY, HEREIN CONVEYED, MAY BE PROTECTED FROM DAMAGE DUE TO MINE SUBSIDENCE BY A PRIVATE CONTRACT WITH THE OWNERS OF THE ECONOMIC INTEREST IN THE COAL. THIS NOTICE IS INSERTED HEREIN TO COMPLY WITH THE BITUMINOUS MINE SUBSIDENCE AND LAND CONSERVATION ACT OF 1966, AS AMENDED 1980, OCT. 10, P.L. 874, NO. 156 § 1.

WITNESS:

WESTMORELAND CONSERVANCY

By: Chris L Conway

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)

Instr:200903040006939 03/04/2009
P:5 of 7 F:$64.50 12:19PM
Tom Murphy T20090014195
Westmoreland County RecorderC

Commonwealth of Pennsylvania

County of Westmoreland } ss:

On this the 16th *day of* February, 2009, *before me, a Notary Public, the undersigned officer, personally appeared* TERRY L. CAYWOOD, Executor under the Last Will and Testament of Jane M. Caywood, Deceased, *known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.*

In Witness Whereof, *I hereunto set my hand and official seal.*

Elizabeth Bailey
Notary Public

My Commission Expires:

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Elizabeth Bailey, Notary Public
Murrysville Boro, Westmoreland County
My Commission Expires July 1, 2012
Member, Pennsylvania Association of Notaries

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Z-1159

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)

Instr:200903040008938 03/04/2009
P:6 of 7 F:$54.50 12:19PM
Tom Murphy T20090014195
Westmoreland County RecorderC

State of New Hampshire

County of Hillsborough } **SS:**

On this the 18th *day of* February, 2009, *before me, a Notary Public, the undersigned officer, personally appeared* JANICE E. CAYWOOD BEAUREGARD, Executor under the Last Will and Testament of Jane M. Caywood, Deceased, *known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument and acknowledged that she executed the same for the purposes therein contained.*

In Witness Whereof, *I hereunto set my hand and official seal.*

Notary Public

My Commission Expires:

MEGHAN A. MUSSAW, Notary Public
My Commission Expires September 3, 2013

Grantee's precise residence is: P.O. Box 446, Morrysville PA 15668.

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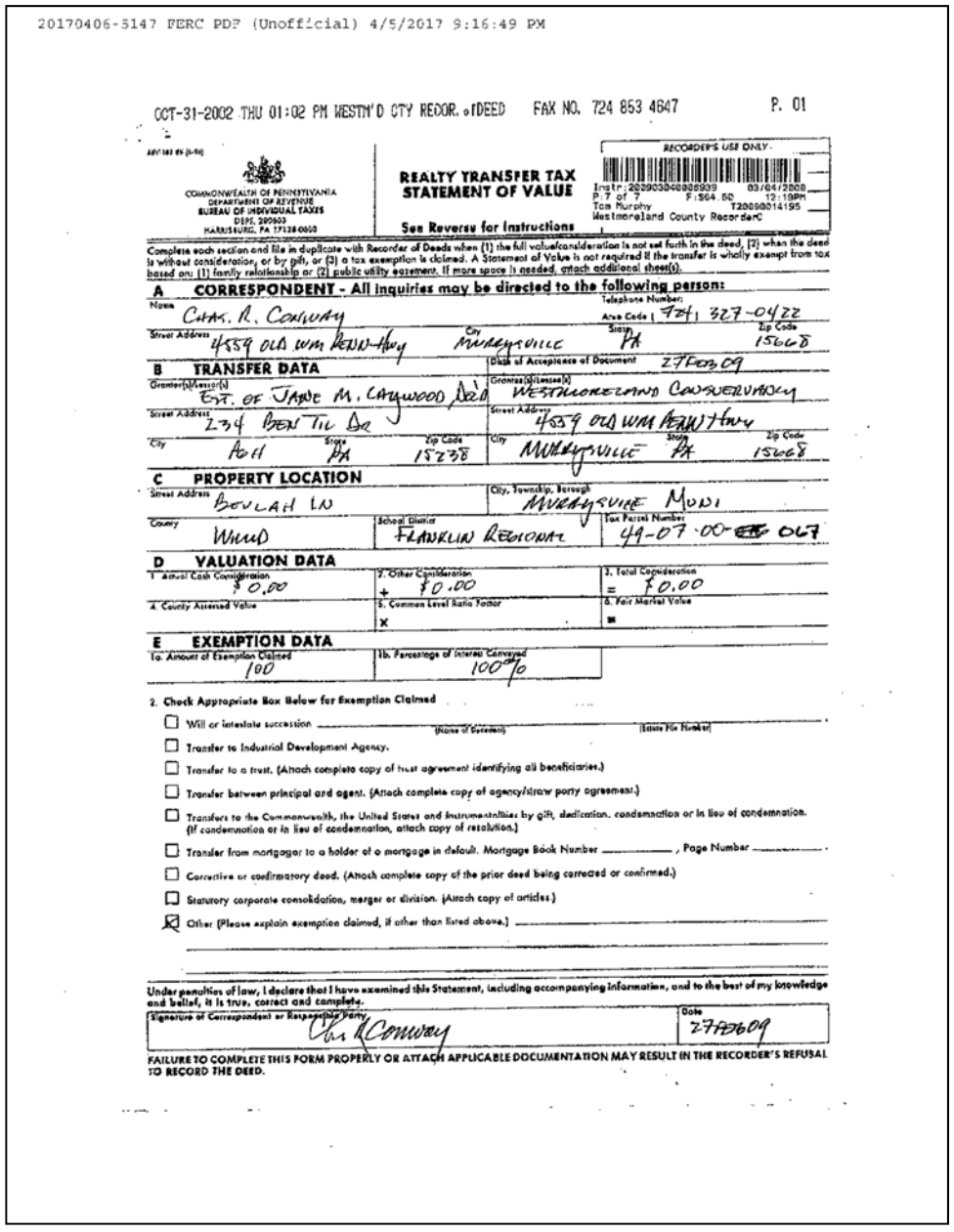
Z-1160

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)



20170406-5147 FERC PDF (Unofficial) 4/5/2017 9:16:49 PM

OCT-31-2002 THU 01:02 PM WESTM'D CTY RECOR. of DEED FAX NO. 724 853 4647 P. 01

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF REVENUE
BUREAU OF INDIVIDUAL TAXES
DEPT. 280603
HARRISBURG, PA 17128-0603

REALTY TRANSFER TAX STATEMENT OF VALUE

See Reverse for Instructions

RECORDER'S USE ONLY
Instr: 200303040008939 03/04/2003
P 7 of 7 F:$64.50 12:19PM
Tom Murphy T20030014195
Westmoreland County Recorder

Complete each section and file in duplicate with Recorder of Deeds when (1) the full value/consideration is not set forth in the deed, (2) when the deed is without consideration, or by gift, or (3) a tax exemption is claimed. A Statement of Value is not required if the transfer is wholly exempt from tax based on: (1) family relationship or (2) public utility easement. If more space is needed, attach additional sheet(s).

A CORRESPONDENT - All inquiries may be directed to the following person:

Name: CHAS. R. CONWAY
Telephone Number: Area Code (724) 327-0422
Street Address: 4559 OLD WM PENN Hwy
City: MURRYSVILLE
State: PA
Zip Code: 15668

B TRANSFER DATA

Date of Acceptance of Document: 27 FEB 03
Grantor(s)/Lessor(s): EST. OF JANE M. CAMWOOD, DEC'D
Grantee(s)/Lessee(s): WESTMORELAND CONSERVANCY
Street Address: 234 BEN TIL DR
Street Address: 4559 OLD WM PENN Hwy
City: ACME
State: PA
Zip Code: 15238
City: MURRYSVILLE
State: PA
Zip Code: 15668

C PROPERTY LOCATION

Street Address: BOULAH LN
City, Township, Borough: MURRYSVILLE MUNI
County: WMLD
School District: FRANKLIN REGIONAL
Tax Parcel Number: 49-07-00 ~~-067~~

D VALUATION DATA

1. Actual Cash Consideration: $0.00
2. Other Consideration: + $0.00
3. Total Consideration: = $0.00
4. County Assessed Value:
5. Common Level Ratio Factor: X
6. Fair Market Value: =

E EXEMPTION DATA

1a. Amount of Exemption Claimed: 100
1b. Percentage of Interest Conveyed: 100%

2. Check Appropriate Box Below for Exemption Claimed

- ☐ Will or intestate succession _____ (Name of Decedent) _____ (Estate File Number)
- ☐ Transfer to Industrial Development Agency.
- ☐ Transfer to a trust. (Attach complete copy of trust agreement identifying all beneficiaries.)
- ☐ Transfer between principal and agent. (Attach complete copy of agency/straw party agreement.)
- ☐ Transfers to the Commonwealth, the United States and Instrumentalities by gift, dedication, condemnation or in lieu of condemnation. (If condemnation or in lieu of condemnation, attach copy of resolution.)
- ☐ Transfer from mortgagor to a holder of a mortgage in default. Mortgage Book Number _____, Page Number _____
- ☐ Corrective or confirmatory deed. (Attach complete copy of the prior deed being corrected or confirmed.)
- ☐ Statutory corporate consolidation, merger or division. (Attach copy of articles.)
- ☒ Other (Please explain exemption claimed, if other than listed above.) _____

Under penalties of law, I declare that I have examined this Statement, including accompanying information, and to the best of my knowledge and belief, it is true, correct and complete.

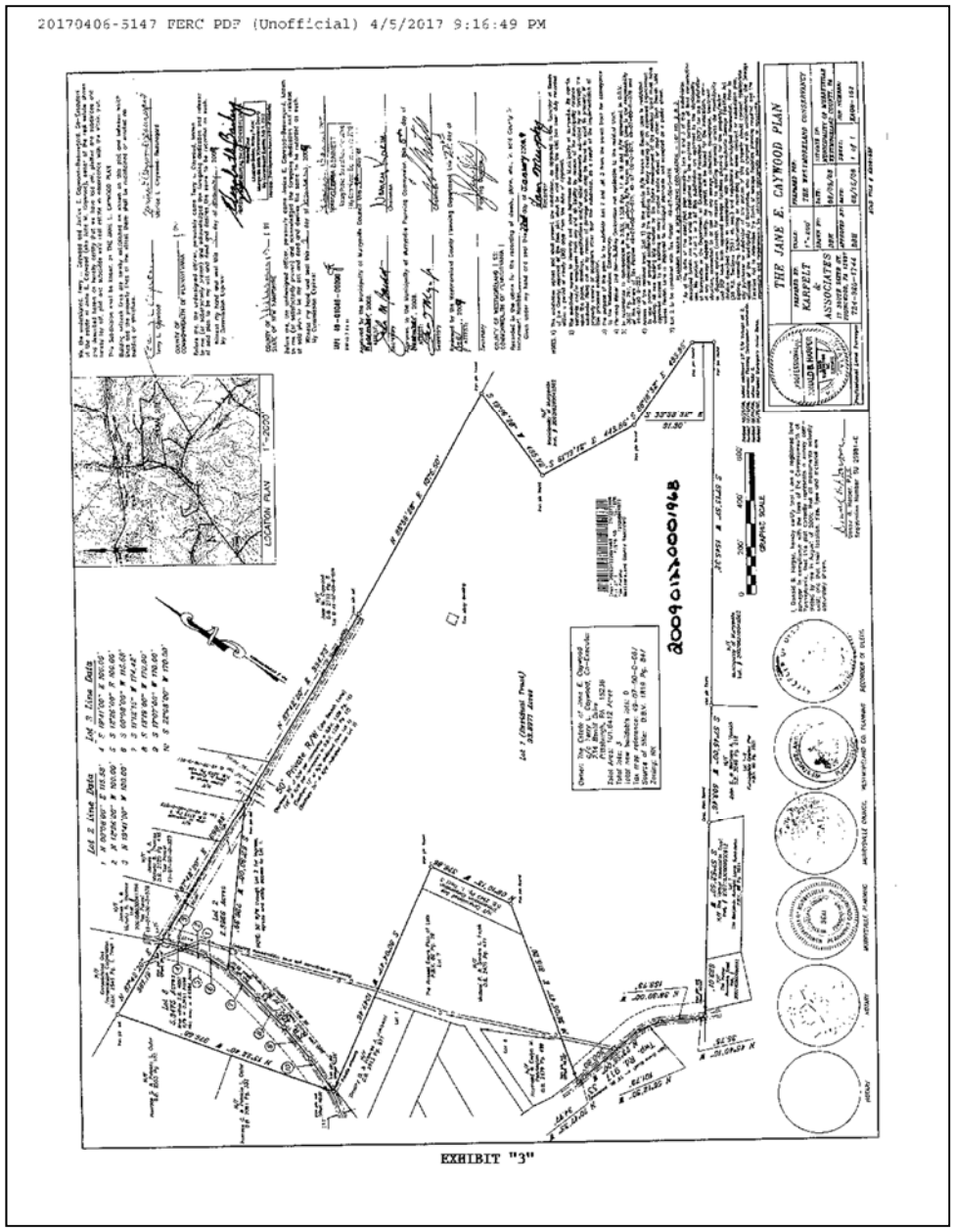
Signature of Correspondent or Responsible Party: Chas R Conway
Date: 27 FEB 03

FAILURE TO COMPLETE THIS FORM PROPERLY OR ATTACH APPLICABLE DOCUMENTATION MAY RESULT IN THE RECORDER'S REFUSAL TO RECORD THE DEED.

Z-1161

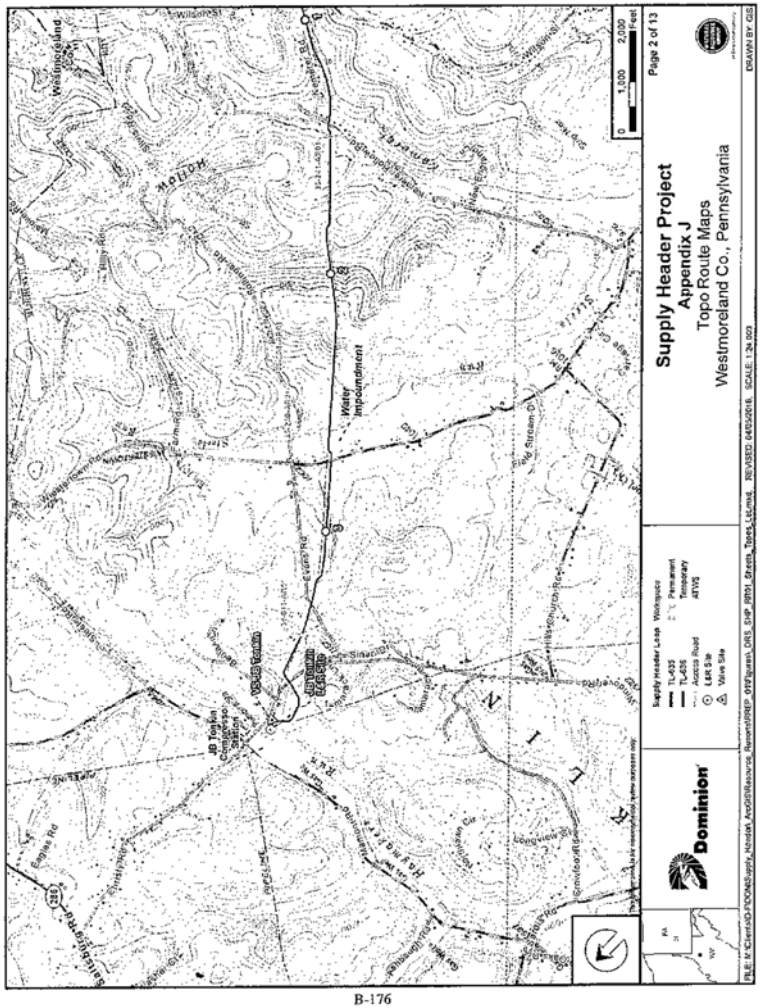
COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)



COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)



B-176

EXHIBIT "4"

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)

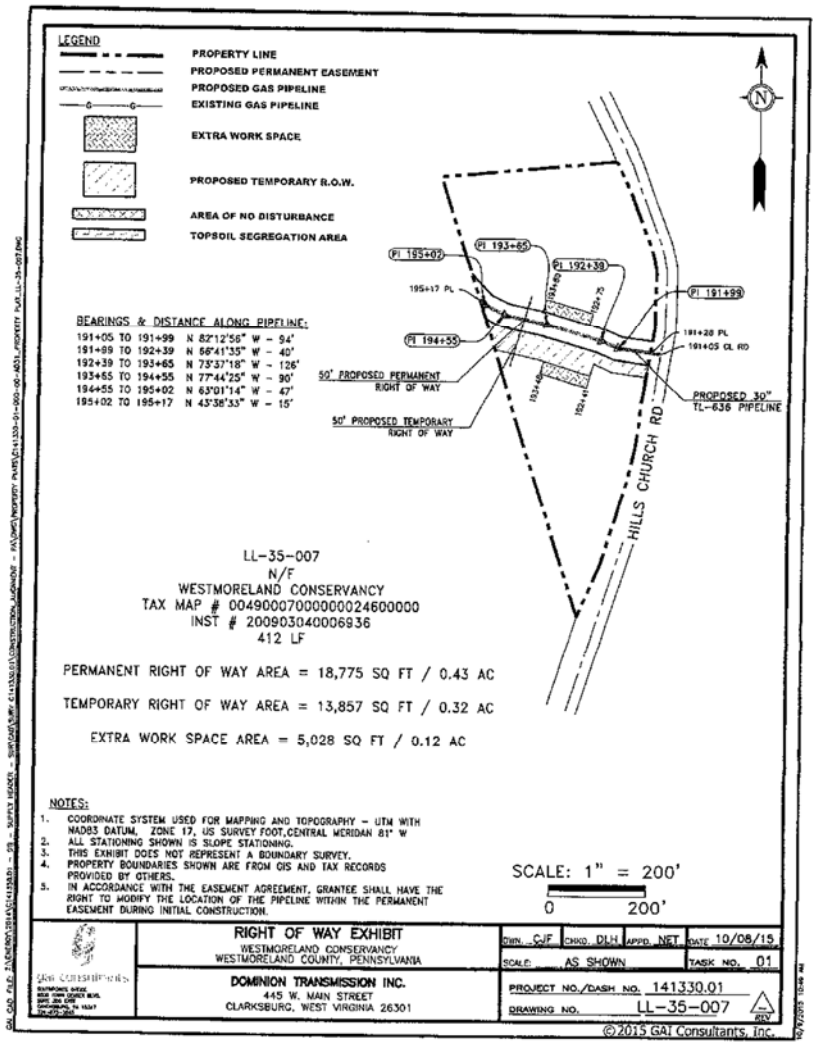


EXHIBIT "5"

Z-1164

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)

Appendix K-2

Waterbody Crossings Along the Supply Header Project

County, State/ Commonwealth	Facilities Crossed	Project Segment / Milepost	Feature Name	Waterbody Regime	Access Road (AR) and Centerline (CL) Crossings (feet) *	Survey/Desktop Estimated OHWM Width (feet) *	Construction Method *	Blasting Planned (In-stream or within 1000 feet)	State/Commonwealth Regulatory Classification	Impairment	State/Commonwealth or Federal Time of Year Restriction (TOYR) (work limited between dates listed)	State/Commonwealth and Federal Species Survey Results / Assumed Presence based on Agency Data *	DTI Commitments to Conservation Measures (TOYR or other commitments) *
Wetzel County, WV	Perm AR	TL-635 / 30.9	Richwood Run	Perennial	34 (AR)	15	Perm AR	NA	B1	Fecal Coliform	April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Wetzel County, WV	Perm AR	TL-635 / 30.9	Richwood Run	Perennial	24 (AR)	15	Perm AR	NA	B1	Fecal Coliform	April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Wetzel County, WV	Pipeline Workspace	TL-635 / 31.8	Upper Run	Perennial	39 (CL)	30	Dam and Pump	In-stream; Within 1000 feet	B1	Fecal Coliform	April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Wetzel County, WV	Pipeline Workspace	TL-635 / 32.2	UNT to Upper Run	Perennial	16 (CL)	15	Dam and Pump	In-stream; Within 1000 feet	UNT to B1		April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Wetzel County, WV	Pipeline Workspace	TL-635 / 33.2	Lower Run	Perennial	27 (CL)	7	1) Dam and Pump 2) Flume	In-stream; Within 1000 feet	B1		April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Wetzel County, WV	Perm AR	TL-635 / 33.2	Lower Run	Perennial	31 (AR)	7	Perm AR	NA	B1		April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Wetzel County, WV	Perm AR	TL-635 / 33.4	Lower Run	Perennial	14 (AR)	14	Perm AR	NA	B1		April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Wetzel County, WV	Pipeline Workspace	TL-635 / 33.4	UNT to Lower Run	Perennial	15 (CL)	15	Dam and Pump	In-stream; Within 1000 feet	UNT to B1		April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Wetzel County, WV	Perm AR	TL-635 / 33.5	South Fork Fishing Creek	Perennial	87 (AR)	32	Perm AR	NA	B1, HQS		April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Wetzel County, WV	Perm AR	TL-635 / 33.5	UNT to Lower Run	Perennial	11 (AR)	10	Perm AR	NA	UNT to B1		April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Wetzel County, WV	Perm AR	TL-635 / 33.5	UNT to Lower Run	Perennial	7 (AR)	6	Perm AR	NA	UNT to B1		April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Wetzel County, WV	Perm AR	TL-635 / 33.5	UNT to Lower Run	Perennial	7 (AR)	6	Perm AR	NA	UNT to B1		April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Wetzel County, WV	Compressor Station	Mockingbird Hill / 33.5	UNT to Lower Run	Intermittent	NA	10	Compressor Station - Temporary Impact	NA	UNT to B1		April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Wetzel County, WV	Compressor Station	Mockingbird Hill / 33.8	UNT to Lower Run	Perennial	NA	6	Compressor Station - Temporary Impact	NA	UNT to B1		April 1 - June 30		Will adhere to time of year restrictions for work within the waterbody.
Westmoreland County, PA	Pipeline Workspace	TL-636 / 0.2	UNT to Turtle Creek	Perennial	4 (CL)	3	1) Dam and Pump 2) Flume	In-stream; Within 1000 feet	TSF	Aquatic Life	March 1 - June 15		Will adhere to time of year restrictions for work within the waterbody.
Westmoreland County, PA	Perm AR	TL-636 / 0.2	UNT to Turtle Creek	Perennial	13 (AR)	3	Perm AR	NA	TSF	Aquatic Life	March 1 - June 15		Will adhere to time of year restrictions for work within the waterbody.
Westmoreland County, PA	Pipeline Workspace	TL-636 / 0.8	UNT to Turtle Creek	Perennial	3 (CL)	3	1) Dam and Pump 2) Flume	In-stream; Within 1000 feet	TSF	Aquatic Life	March 1 - June 15		Will adhere to time of year restrictions for work within the waterbody.
Westmoreland County, PA	Pipeline Workspace	TL-636 / 1.2	UNT to Kemerer Hollow	Perennial	4 (CL)	4	1) Dam and Pump 2) Flume	In-stream; Within 1000 feet	Unclassified	Aquatic Life	NA		
Westmoreland County, PA	Perm AR	TL-636 / 1.3	UNT to Kemerer Hollow	Perennial	4 (AR)	4	Perm AR	NA	Unclassified	Aquatic Life			
Westmoreland County, PA	Pipeline Workspace	TL-636 / 1.3	Kemerer Hollow	Perennial	5 (CL)	4	1) Dam and Pump 2) Flume	In-stream; Within 1000 feet	Unclassified	Aquatic Life	NA		
Westmoreland County, PA	Pipeline Workspace	TL-636 / 1.7	UNT to Kemerer Hollow	Perennial	6 (CL)	1	1) Dam and Pump 2) Flume	In-stream; Within 1000 feet	Unclassified	Aquatic Life	NA		
Westmoreland County, PA	Pipeline Workspace	TL-636 / [illegible]	UNT to Kemerer Hollow	Perennial	5 (CL)	5	1) Dam and Pump 2) Flume	In-stream; Within 1000 feet	Unclassified	Aquatic Life	NA		
Westmoreland County, PA	Pipeline Workspace	TL-636 / 2.5	UNT to Steels Run	Perennial	4 (CL)	4	1) Dam and Pump 2) Flume	In-stream; Within 1000 feet	UNT to HQ-CWF	Aquatic Life	NA		
Westmoreland County, PA	Pipeline Workspace	TL-636 / 2.6	Steels Run	Perennial	7 (CL)	6	1) Dam and Pump 2) Flume	In-stream; Within 1000 feet	HQ-CWF	Aquatic Life	October 1 to December 31		Will adhere to time of year restrictions for work within the waterbody.
Westmoreland County, PA	Perm AR	TL-636 / 2.7	UNT to Steels Run	Perennial	2 (AR)	2	Perm AR	NA	UNT to HQ-CWF				

EXHIBIT "6"

Appendix K-2

Waterbody Crossings Along the Supply Header Project

County, State/ Commonwealth	Facilities Crossed	Project Segment / Milepost	Feature Name	Waterbody Regime	Access Road (AR) and Centerline (CL) Crossings (feet) *	Survey/Desktop Estimated OHWM Width (feet) *	Construction Method *	Existing Planned (in-stream or within 1000 feet)	State/Commonwealth Regulatory Classification	Impairment	State/Commonwealth or Federal Time of Year Restriction (TOYR) (work limited between dates listed)	State/Commonwealth and Federal Species Survey Results / Assumed Presence based on Agency Data *	DTI Commitments to Conservation Measures (TOYR or other commitments) *
Westmoreland County, PA	Pipeline Workspace	TL-636 / 2.5	UNT to Steels Run	Perennial	10 (CL)	10	1) Dam and Pump 2) Flume	In-stream; Within 1000 feet	UNT to HQ-CWF	Aquatic Life	NA		
Westmoreland County, PA	Pipeline Workspace	TL-636 / 3.2	UNT to Steels Run	Perennial	8 (CL)	4	1) Dam and Pump 2) Flume	In-stream; Within 1000 feet	UNT to HQ-CWF	Aquatic Life	NA		
Westmoreland County, PA	Pipeline Workspace	TL-636 / 3.6	UNT to Haymakers Run	Perennial	6 (CL)	5	1) Dam and Pump 2) Flume	In-stream; Within 1000 feet	UNT to HQ-CWF		NA		
Westmoreland County, PA	Pipeline Workspace	TL-636 / 3.8	UNT to Haymakers Run	Perennial	3 (CL)	2	1) Dam and Pump 2) Flume	In-stream; Within 1000 feet	UNT to HQ-CWF		NA		
Westmoreland County, PA	Compressor Station	JB Tonkin / 3.9	UNT to Haymakers Run	Perennial	NA	5	Compressor Station - Temporary Impact	NA	UNT to HQ-CWF		NA		
Westmoreland County, PA	Compressor Station	JB Tonkin / 3.9	Haymakers Run	Perennial	NA	9	Compressor Station - Temporary Impact	NA	HQ-CWF		October 1 - December 31		Will adhere to time of year restrictions for work within the waterbody.
Westmoreland County, PA	Perm AR	TL-636 / 3.9	Haymakers Run	Perennial	3 (AR)	9	Perm AR	NA	HQ-CWF		October 1 - December 31		Will adhere to time of year restrictions for work within the waterbody.
Westmoreland County, PA	Compressor Station	JB Tonkin / 3.9	UNT to Haymakers Run	Perennial	NA	3	Compressor Station - Temporary Impact	NA	UNT to HQ-CWF		NA		

* "Access Road (AR) and Centerline (CL) Crossings" and "Survey/Desktop Estimated OHWM Width" represent measures of the width or crossing width of waterbodies. The first two crossing lengths for access roads and for the pipeline centerline are GIS derived measurements based on waterbody polygons and the distance the respective facilities (access road or pipeline centerline) cross within the waterbody polygon. The third column of measurement is included for features that are not crossed by either an access road or the pipeline centerline, based on the field survey or desktop estimated ordinary high water mark (OHWM) width of the waterbodies.

* Construction Method includes trenching construction methods for waterbodies that have a pipeline centerline crossing length. For waterbodies that are not crossed by the pipeline centerline or other unique facility components this column reads "Not Crossed by Centerline". For waterbodies that intersect unique facility components (e.g., compressor stations, contractor yards) the column refers to the unique facility crossed and/or notes the nature of the planned impacts.

* Based on results of field surveys conducted by DTI, and/or based on [illegible] survey data provided by federal and/or state agencies denoting presence of sensitive species within the waterbody or watershed. The federal and state listed species that were documented during DTI surveys at waterbody crossing locations are not disclosed in this table in order to protect the species from over-collection, habitat degradation, and/or to respect [illegible], land-managing agencies, and/or regulatory agencies request to restrict the release of the location information.

* Includes Agency Recommended Mitigation measures received to date in consultation with State/Commonwealth and Federal agencies. Agency consultations are on-going; updates to mitigation measures will be provided when available.

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)

TABLE E-1 (cont'd)

Access Roads for the Atlantic Coast Pipeline and Supply Header Project

Project/Facility/ Access Road Name	Milepost	County or City	State	Existing Land Uses	New/ Existing	Temp./ Perm.	Improvements Required	Ownership	Construction Impacts (acres)	Operation Impacts (acres)	Length (miles)
			PA	Developed	New	Perm.	Yes	Private	0.1	0.1	<0.1
			PA	Upland Forest/Woodland	New	Perm.	Yes	Private	<0.1	<0.1	<0.1
36-239-AR01	1.3	Westmoreland	PA	Agriculture – Crops and Pasture	Existing	Perm.	Yes	Private	0.2	0.2	<0.1
			PA	Developed	Existing	Perm.	Yes	Private	<0.1	<0.1	<0.1
			PA	Waterbody	Existing	Perm.	Yes	Private	<0.1	<0.1	<0.1
35-241-AR01	1.4	Westmoreland	PA	Agriculture – Crops and Pasture	New	Perm.	Yes	Private	0.1	0.1	0.0
			PA	Developed	New	Perm.	Yes	Private	0.1	0.1	0.0
35-234-AR01	2.1	Westmoreland	PA	Agriculture – Crops and Pasture	Existing	Perm.	Yes	Private	0.1	0.1	<0.1
			PA	Agriculture – Crops and Pasture	Existing	Perm.	Yes	Private	0.6	0.6	0.2
			PA	Developed	Existing	Perm.	Yes	Private	0.3	0.3	0.1
			PA	Upland Forest/Woodland	Existing	Perm.	Yes	Private	0.2	0.2	0.1
35-230-AR01	2.7	Westmoreland	PA	Agriculture – Crops and Pasture	Existing	Perm.	Yes	Private	0.3	0.3	0.1
			PA	Developed	Existing	Perm.	Yes	Private	0.3	0.3	0.1
			PA	Upland Forest/Woodland	Existing	Perm.	Yes	Private	<0.1	<0.1	<0.1
			PA	Waterbody	Existing	Perm.	Yes	Private	<0.1	<0.1	<0.1
35-011-AR01	3.4	Westmoreland	PA	Agriculture – Crops and Pasture	Existing	Perm.	Yes	Private	<0.1	<0.1	<0.1
			PA	Developed	Existing	Perm.	Yes	Private	<0.1	<0.1	<0.1
			PA	Upland Forest/Woodland	Existing	Perm.	Yes	Private	0.3	0.3	0.1
35-001-AR01	3.8	Westmoreland	PA	Agriculture – Crops and Pasture	Existing	Perm.	Yes	Private	0.2	0.2	0.1
			PA	Developed	Existing	Perm.	Yes	Private	0.1	0.1	<0.1
			PA	Developed	Existing	Perm.	Yes	Private	0.4	0.4	0.1
			PA	Upland Forest/Woodland	Existing	Perm.	Yes	Private	<0.1	<0.1	<0.1
			PA	Waterbody	Existing	Perm.	Yes	Private	<0.1	<0.1	<0.1
								TL-636 Total	12.6	12.6	3.8
								SHP Total	115.6	115.6	33.6

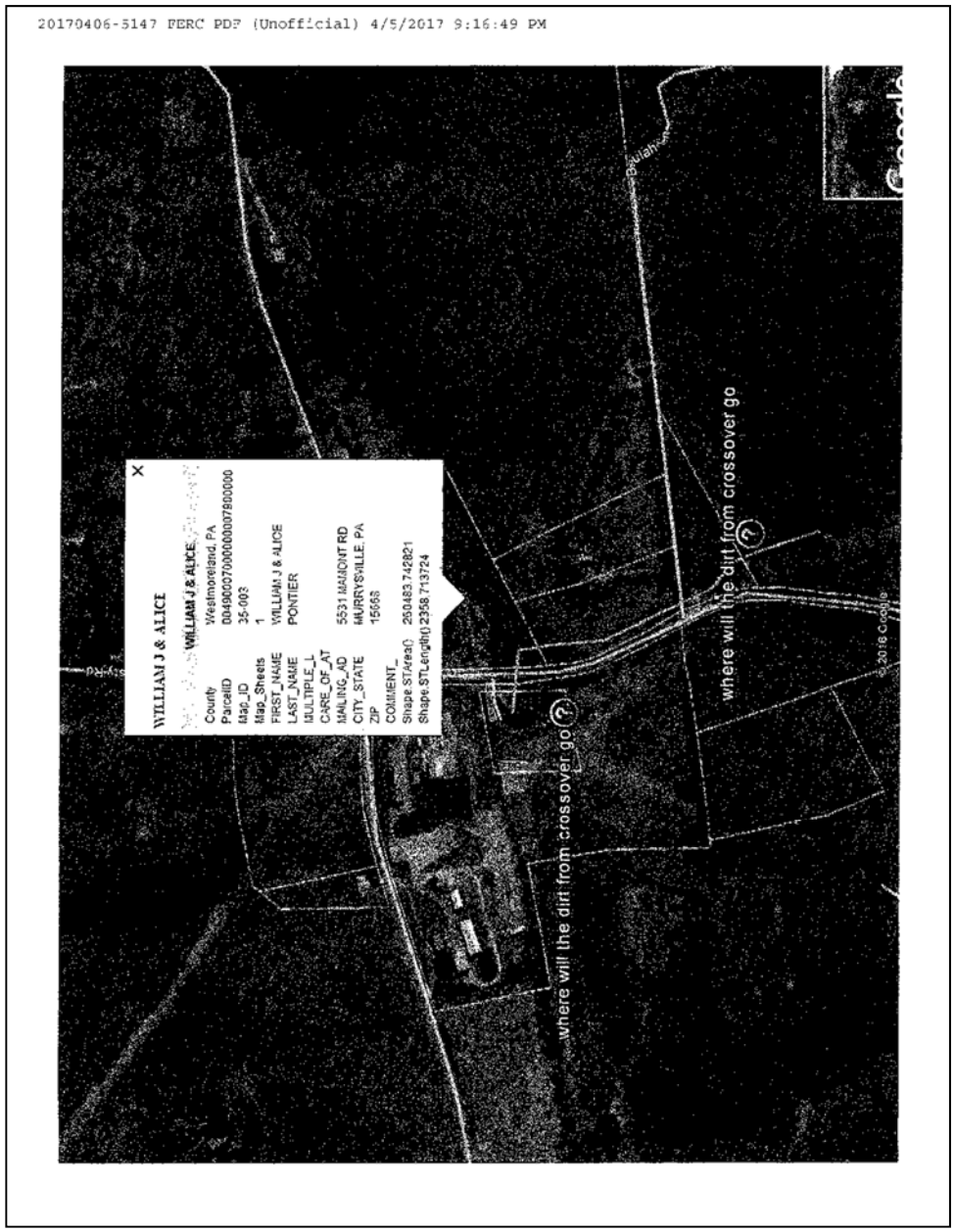
Note: FS System roads proposed as access roads on NFS lands are provided in table 4.8.9-3.

E-62

EXHIBIT "7"

COMPANIES/ORGANIZATIONS COMMENTS

CO71 – Westmoreland Conservancy (cont'd)



COMPANIES/ORGANIZATIONS COMMENTS

CO72 – Highland County Cave Survey

April 6, 2017

Richard A. Lambert

Highland County Cave Survey

P. O. Box 151

Monterey, VA 24465

Nathaniel J. Davis, Sr., Deputy Secretary

Federal Energy Regulatory Commission

888 First Street NE. Room 1A

Washington, DC 20426

Mr. Davis,

The Highland County Cave Survey (HCCS) would like to direct your attention to the Atlantic Coast Pipeline Contour Map 51 and to the eastern section of that map (reprinted below).

CO72-1 This map shows the proposed pipeline corridor in relationship to the karst features in Valley Center, Highland County, Virginia (Mile Posts 88.6 and 88.7). In the Highland County Cave Survey's submission to FERC on June 3, 2016 we pointed out the dangers of the pipeline ROW going through this cluster of karst features. Dominion's own contractor, GeoConcepts Engineering, Inc., labelled this cluster as "High Risk". In the DEIS, FERC repeated that this cluster is "High Risk". Yet the pipeline ROW remains unchanged.

This map shows the ACP ROW going through karst features (sinkholes). This is a violation of the proposed Best Management Practices in the January 20, 2017 Karst Terrain Assessment Construction, Monitoring and Mitigation Plan prepared by GeoConcepts Engineering, Inc., page 16, Measures to Avoid Impact to the Karst Aquifer and Environment, 2.f., which states: "No activity of any kind shall be allowed within the parapet of a sinkhole or within a 25-ft buffer around the parapet, which should remain in an undisturbed, natural state. The sinkhole and the 25-ft parapet buffer should be delineated using temporary fencing."

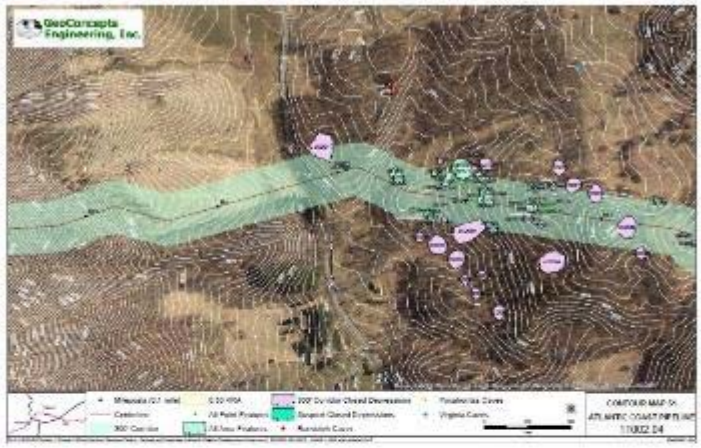
Z-1169

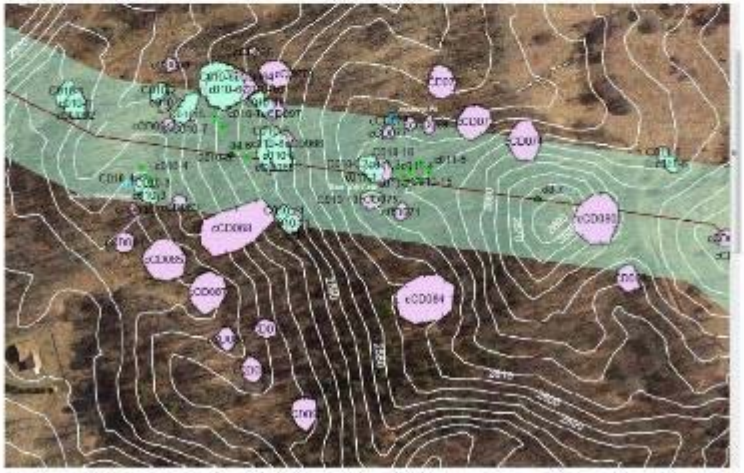
CO72-1 As discussed in sections 4.1.2.3 and 4.3.1.7, Atlantic has proposed several measures to minimize impacts on karst systems and private water sources, including the use of karst monitors, conducting electric resistivity surveys to avoid or minimize karst impacts, and monitoring water quality impacts during and after construction, as necessary. Because appropriate impact minimization and mitigation would be implemented, we have concluded that an alternate route, such as the Valley Center Route Variation, would not offer a significant environmental advantage when compared to Atlantic's proposed route.

COMPANIES/ORGANIZATIONS COMMENTS

CO72 – Highland County Cave Survey (cont'd)

CO72-1 (cont'd)





CO72 – Highland County Cave Survey (cont'd)

CO72-1 (cont'd)

The above section of Contour Map 51 shows the proposed pipeline ROW going through the parapet of four large sinkholes and through several all point features (small karst features). The proximity of the karst features to each other will not allow enough room for the work space to be narrowed to squeeze the pipeline between the karst features and still maintain the 25 ft. parapet buffer.

Dominion is not listening to the HCCS, they are not listening to FERC, they are not listening to their own karst contractor, and they are not following the proposed Best Management Practices they claim they will follow in constructing this proposed pipeline. This demonstrates a "business as usual" attitude which shows a high disregard for the complex, interconnected karst systems in Valley Center, the un-sampled underground biological community these karst features support, and the families which depend on the ground water these karst features recharge.

Contour Map 51 is an example of Dominions inexperience in building on karst and why Dominion should not be allowed to build a pipeline through karst. This route is a prescription for a disaster which Dominion will not be able to clean up. This regulatory process must stop until the proposed ROW for the ACP is moved away from this "High Risk" cluster of karst features in Valley Center, Highland County, Virginia and the HCCS and others have an opportunity to examine and comment on the new route.

Sincerely,

Richard A. Lambert

Database Manager

Highland County Cave Survey

Z-1171

COMPANIES/ORGANIZATIONS COMMENTS

CO73 – Appalachian Trail Conservancy

APPALACHIAN TRAIL CONSERVANCY®

Federal Energy Regulatory Commission
Kimberly D. Bose, Secretary
888 First St. N.E. Room 1A
Washington, DC 20426

Re: Comments on Atlantic Coast Pipeline's Draft Environmental Impact Statement.

Thank you for considering the comments of the Appalachian Trail Conservancy (ATC). The ATC and our partner clubs have a congressionally identified responsibility to coordinate the preservation and management of the Appalachian National Scenic Trail (ANST), which is an independent unit of the National Park System (NPS). We are submitting these comments on behalf of the ATC and the National Parks Conservation Association.

The ANST is visited by over three million people a year. Some of the most heavily visited areas are within the project area and would be visible to those seeking to experience the outstanding scenic, natural and cultural value of this National Scenic Trail. The ANST is unique due to the fact it is accessible to the highly populated East Coast and honored throughout the world as the longest footpath. We assert that these values and qualities should be top of mind as you consider the following comments.

We have five major areas of concern for the proposed action, the Atlantic Coast Pipeline.

1. Incomplete Alternatives Analysis

The ACP DEIS states: *"The NPS has indicated that it does not have the authority to authorize a pipeline crossing of the ANST on its lands. Instead, legislation proposed by Congress and signed into law by the President would be necessary to allow the NPS the authority to review, analyze, and approve a pipeline crossing of the ANST on its lands. Because of this legislative process, Atlantic considered locations where the ANST was located on lands acquired and administered by the FS, which significantly constrained the pipeline route and severely limits opportunities for avoiding and/or minimizing the use of NFS lands."*

CO73-1 In section 3.3.4.1, the ACP DEIS also dismisses alternatives avoiding or minimizing impacts to the ANST and surrounding forest lands because planning, design and approvals would "take too long." NEPA and CEQ regulations for dismissing alternatives do not include timeframes convenient to the applicant. In fact, alternatives cannot be dismissed because they are cheaper and faster. (NPS NEPA Handbook Section 2.7A and B 2015)

FERC inconsistently dismisses some alternatives because route modifications along the ANST would require congressional approval. Other alternatives are dismissed stating that congressional approval was not a factor, even though approval by Congress would be required.

SOUTHWEST AND CENTRAL VIRGINIA REGIONAL OFFICE
5162 Valleypointe Parkway, Roanoke, VA 24019 | Phone: 540.904.4393 | Fax: 540.904.4368 | www.appalachiantrail.org

CO73-1 Comment noted.

CO73-1 (cont'd)

Without analysis of all alternatives, it is impossible to select the best alternative for the proposed action. Further, without the opportunity to make an informed case for a preferred alternative that would cross National Park Service land, there is no chance to pursue the provided legal mechanisms to cross NPS lands even if the applicant and ATC are in mutual support.

Desired Action

- We request that all alternatives be considered based on their relative environmental impact irrespective of land ownership (NPS or USFS). While a final decision may take into consideration issues of land ownership, it is important to evaluate and explore all alternatives so an informed decision can be made.

2. Viability of the HDD and contingency plan

Both the primary and contingency plans for crossing the Appalachian National Scenic Trail include aggressive strategies to bore extremely long distances under the ANST and the Blue Ridge Parkway. It is unclear how the success probability of these operations was established. Further, given that other pipeline companies proposing similar projects quote significantly smaller figures as maximum drilling distances, the viability of both the primary and contingency plans can be reasonably questioned. Specific contingency plans are postponed to after FERC's Record of Decision.

Desired Actions

CO73-2

- The ATC asks FERC to verify through an independent third party, the viability of all proposed crossing methods of the ANST
- The ATC requests the release of all geologic studies relative to evaluation of the primary and contingency actions prior to release of a FEIS or Supplemental EIS to allow for independent review
- The ATC asks FERC to develop a mechanism that would ensure the construction of the ANST and BLRI crossing occurs first and before any other project construction, the purpose of which would be to ensure:
  - All funds are allocated to a viable project
  - No unfavorable means of crossing the ANST will be required as a last resort to save the project.

3. Forest Plan Amendments to the A.T. Prescription area standard requiring co-location.

There is a significant concern for the proposed action's need to amend the Land and Resource Management Plan of the George Washington National Forest's standard 4A-025 which states:

> *"Locate new public utilities and rights of way in areas of this management prescription area where major impacts already exist."*

The requirement to amend this standard has the ability to negatively affect the ANST in two major ways; first in the establishment of a new utility corridor and second; establishing a new utility corridor that cannot reasonably accommodate future energy or utility projects.

CO73-2 Comments noted. All geologic studies are available for review on the FERC docket.

The complexity of FERC's potential approvals, USFS EIS adoption, four Records of Decisions and a multitude of future promised study and mitigation is also precedent-setting and at odds with a transparent public process.
Further, any amendment to the A.T. prescription area can represent an erosion of protections provided to the entire National Trails System by the forest planning process.

Desired Action

CO73-3
- Analysis of alternatives that do not require an amendment to the A.T. prescription area should be reconsidered and re-evaluated given the significant impact to the National Trails System.

CO73-4
- The analyses should include other potential development that could proceed with an amendment of FS plans and prescription areas.
- The analyses should include what FS objection and appeals processes would be available to the public as the amendment process proceeds, long before any FS RODs are issued.

CO73-5
- A Supplemental Draft EIS should be issued to disclose the precedent-setting nature of the proposed action.

4. Visual Impacts

The National Park System was created by its 1916 Organic Act, as amended, to create and preserve national parks "unimpaired for future generations." (16 U.S.C. 1 et seq.).

The National Park Service Management Policies (2006) and various directives state: "enjoyment by present and future generations can be assured only if these special places are passed on to them in an unimpaired condition." The Appalachian National Scenic Trail was established by the National Trails System Act of 1968, as amended. Thus, like all other national parks in the system, it too must be left unimpaired for present and future generations.

Numerous courts across the nation have affirmed that federal legislation, management directives and the purpose of our nation's treasures must be managed to avoid impairment and derogation by unacceptable impacts. (Blue Water Network v Salazar 2010; Southern Utah Wilderness Alliance v Dabney 2000).

The 2006 NPS Management Policies (section 1.6), "Cooperative Conservation Beyond Park Boundaries," state the conservation beyond park boundaries is necessary as the NPS strives to fulfill its mandate to preserve the natural and cultural resources of parks unimpaired for future generations. Further, section 1.6 states "If a decision is …imminent that will result in unacceptable impacts on park resources, superintendents must take appropriate action …to manage or constrain the use to minimize impacts." The Appalachian National Scenic Trail, as a unit of the national park system, must therefore be protected from both internal and external derogation in order to adhere to its legislative purpose to, among other things, preserve scenic resources.

The USFS has an agreement with the NPS to cooperatively protect and manage the ANST, a result of which is an ANST management zone in forest management plans for all National Forests hosting the Trail. A prescription for the ANST scenic resources requires Forest managers

CO73-3 Comments noted.

CO73-4 FS response: The FS no longer proposes to change any land allocations to the Rx5C-Designated Utility Corridors on the GWNF. Because of that, there is no longer an amendment proposal that would be subject to the objection process under the 36 CFR 219 regulations. All proposed amendments are now project-specific, so that they only apply to the ACP project. The objection process will be under the 36 CFR 218 regulations, which opens a 45-day objection period following the release of the Draft ROD from the FS. The objection process has been shown as part of the review process on the GWNF's website for several months.

CO73-5 The EIS was prepared in accordance with NEPA, CEQ guidelines, and other applicable requirements. The EIS is consistent with FERC style, formatting, and policy regarding NEPA evaluation of alternatives and different types of impacts. The EIS is comprehensive and thorough in its identification and evaluation of feasible mitigation measures to reduce those effects whenever possible. As such, a supplemental draft EIS is not warranted.

to manage scenic resources to a high quality Scenic Integrity Objective. Anything less than the high quality viewshed experienced by visitors to the trail would be an impairment to the ANST for many generations to come.

The supplemental Visual Impact Analysis filed January 2017 shows extensive visual impacts to the foreground of the ANST at multiple locations. Some of these visual impacts can and must be avoided. Others impacts are unavoidable and the scope of impacts must be further analyzed.

Impacts identified in KOP ANST 05 and 06 may be in the middle ground and a significant portion of the pipeline visible from these KOPs may traverse USFS lands. It's important to document exactly the length of visible pipeline on USFS lands that is observable to the A.T. visitor and what effect this will have on the Scenic Integrity Objectives for the Appalachian Trail prescription area identified in the George Washington Forest Plan.

The KOPs taken at ANST 08, Three Ridges Overlook identify the single greatest visual impairment to the ANST that would result from this proposed action, but do not adequately provide a baseline for quantifying this impact. Additional visual simulations are needed at this location to best quantify impacts to the ANST at the Three Ridges Overlook.

Desired Actions

CO73-6

- Additional visual impact analysis filed after the DEIS reveal that the proposed action would result in significant impairments to the Appalachian National Scenic Trail. Less impactful alternatives must be re-evaluated given the potential impact represented in the analysis.

5. Incomplete Cumulative Impact Analysis

The cumulative impact analysis does not use an approach consistent with the methodology set forth in relevant guidance, specifically the Council on Environmental Quality's "Considering Cumulative Impact" (1997). While the DEIS correctly states that the applicant must consider "projects of comparable magnitude and timeframe" which "must impact the same resource category" and lists the Mountain Valley Pipeline (MVP) project as a likely source of cumulative impact, the DEIS fails to analyze or address cumulative impacts to the ANST from the proposed ACP and MVP projects which is required by NEPA and identified in the CEQ's referenced guidance given that:

1. MVP and ACP are of comparable magnitude.
2. MVP and ACP are proposed within a similar timeframe.
3. MVP and ACP both impact the ANST and require identical amendments to the USFS's FLRMP.
4. MVP and ACP together impact a section of the ANST commonly experienced by a visitor during a single visit.
5. Visual impacts from MVP and ACP would be virtually identical to visitors on the ANST.
6. The Environmental Protection Agency's December 20, 2016 comments on the MVP DEIS strongly states that the MVP cumulative analysis is grossly deficient, yet the ACP DEIS dismisses the related scope between the two projects. Assuming FERC

CO73-6 Section 4.8.9.1 discusses impacts on visual resources on federal lands, including the ANST, resulting from construction and operation of the project. The VIA further details the results of visual surveys and simulations in coordination with the FS, ATC, and NPS. None of the impacts have been characterized as significant.

corrects this deficiency in the MVP EIS process, the cumulative analysis should be corrected in a SEIS for the ACP.

7. FERC's Guidance Manual, February 2017, states that for some resources, cumulative impacts must be addressed for a larger geographical scope, beyond the project "impact zone." The basis for the assumption in the DEIS that limits impact analyses to .25 or .5 miles is never fully explained. Yet, the Guidance Manual acknowledges that air quality impacts could be well beyond these limits. The same holds true for the ANST visual impact analyses.

The need for effective cumulative impact analysis is further supported by the following quotes from the ACP and MVP DEIS:

"ACP and SHP could result in cumulative impacts on recreation such as fishing, hunting, biking etc., and special interest areas if other projects affect the same areas or feature at the same time which would include MNF and GWNF {The ANST}" –ACP DEIS 4-503

"However, in selected areas such as views from the ANST to the pipeline right-of-way and at the ANST crossing of the GWNF, the potential for visual impacts (from ACP combined with other projects listed in table W-1) is elevated and thus may be mitigated further…" –ACP DEIS 4-504

… "the merged system (ACP and MVP) holds several environmental advantages over constructing both projects separately, including increased colocation, avoidance of MNF and GWNF, reduced crossings of the ANST and BRP, reduced number of access roads and contractor/pipe yards, and less construction across karst terrain." –ACP DEIS 5-26

"ACP would cross both the BRP and the ANST thereby potentially contributing to cumulative impacts."
-MVP DEIS 4-508

The ACP DEIS does an adequate job listing the proposed MVP project as a contributor to cumulative impact, but fails to analyze those impacts due to a definition of the geographic scope of analysis for the ANST that does not follow CEQ and other relevant guidance. The ACP DEIS incorrectly establishes the geographic scope of impact of the ANST as the "construction footprint of the project," failing to take into account cumulative effects from visual impacts and from amending the FLRMP as required in 36CFR219.

A comprehensive analysis of the proposed pipeline and its potential cumulative impacts on the A.T. should be conducted now, not later. Recent case law (Delaware Riverkeeper Network, et al. v. Federal Energy Regulatory Commission) suggests that FERC has the responsibility to avoid segmentation through a cumulative review of other related projects and impacts.

Finally, it's important to reassert that the A.T. Prescription standard requiring co-location of utility projects is a means of mitigating cumulative impacts. Amending this prescription standard not only eliminates the ability of the USFS to mitigate cumulative impact by co-locating ACP on an existing utility corridor but makes further application of the standard impossible in the case of ACP given that project construction methods and manipulation of the 5c utility corridor's width

effectively preclude future projects from being co-located on the utility corridor established for ACP.

Desired Actions

CO73-7
- Given that the ACP and MVP projects are of similar magnitude, timeframe, impact the same A.T. Prescription area standards and impact a segment of National Scenic Trail commonly experienced within a single visit to the resource, FERC must require the applicant and the USFS to conduct a thorough cumulative impact analysis relative to the ANST that considers both the proposed Mountain Valley and Atlantic Coast Pipeline projects.

CO73-8
- A minor but important correction to the record must be made. The following statement is incorrect or unknown and cannot be supported**:**

  "However, use of the …bore method (MVP) would not significantly change the foreground views experienced by hikers at the ANST crossings" (p4-504)

  At the time of this filing, the USFS has not made a determination that would support the above statement and has repeatedly corrected any filing to the contrary by stating clearly that more analysis is needed.

Project Timelines and Public Involvement

CO73-9 The impact analyses provides various timeframes for completion of the NEPA process, FERC's Certificate, In Service Approval, Jurisdictional Permits, Forest Plan Amendments, and multitudes of future studies from project design through abandonment. Some phases are promised to not advance unless restoration is deemed to be proceeding successfully and projected to occur "to pre-construction immediately following construction." Fourth quarter, 2019. Performance standards are not specific to the affected area and are generic. In section 2.3.1-1, the DEIS states that reestablishment of trees would take 30 years, yet the impact analyses, in particular to the ANST visual resources is limited to 3 years.

The ACP DEIS lists over 60 major project elements to be assessed prior to the close of the DEIS comment period, FEIS or construction. These elements include critical surveys, studies, feasibility analyses and mitigation measures. (ACP Section 5) It appears FERC and the applicant are purporting a "design-build" proposal, i.e., substantive data and NEPA analyses are to occur after a decision has been made. Adequate public engagement throughout these phases is dependent on FERC's amendments to dockets and while publically available, the process and timelines for comments and potential change in course for the project is not clear. This has been struck down in numerous court decisions, including Sierra Club v Babbitt, 1999. Design-build and "rolling" the analyses gives the public and decision makers a snapshot in time, but no meaningful analyses of impacts throughout the project's life. It also appears to be "segmenting" the 50-year plus project based upon assumptions yet to be determined. This is not in keeping with CEQ regulations. (40 CFR 1508.25)

CO73-7 Consideration of both the MVP and ACP and their impacts on the ANST are included in the cumulative impacts section.

CO73-8 Section 4.13.3.8 has been revised to note that Atlantic continues to work with the FS, NPS, and ATC regarding impacts on and mitigation measures for the ANST crossing.

CO73-9 See the response to comment CO6-1.

CO73-9 (cont'd)

EPA's rating of the MVP DEIS was an EC-2, Environmental Concerns, Insufficient Information, stating that measures for adequate public engagement are inadequate. The same holds true for the ACP. Completion of critical analyses would mean that the applicant and FERC are committing tremendous funds and resources. Along the way, natural and cultural impacts to the ANST and surrounding forest lands would be irreversible and irretrievable, but this is not discussed in the ACP DEIS.

Desired Outcomes

A consistent and complete disclosure should be provided in the Executive Summary and Project Description illustrating what phases are analyzed in the DEIS and what is postponed for future analyses and public involvement from project construction through abandonment.

If "future" analyses and conclusions are necessary as conditions of approvals and permits, impacts should be disclosed in "tiered" in subsequent NEPA and public involvement processes. (40 CFR 1500, 1502, 1508.28). This would assist the public and decision makers to avoid and mitigate significant impacts to the ANST.

Respectfully,

Andrew Downs
Appalachian Trail Conservancy
Regional Director
Central and Southwest Virginia

Cc:

Wendy Janssen, National Park Service Appalachian National Scenic Trail Park Superintendent
Joshua Laird, National Park Service Northeast Regional Director
Job Timm, George Washington and Jefferson National Forests Forest Supervisor
Clyde Thompson, Monongahela National Forest Forest Supervisor
Tony Tooke, USFS Region 8 Regional Forester
Thomas Tidwell, Chief of the USFS
Jennifer Adams, George Washington and Jefferson National Forests Special Projects Coordinator
Karen Mouritsen, Bureau of Land Management Eastern States Director
Senator Tim Kaine, Virginia
Senator Mark Warner, Virginia
Molly Ward, Secretary of Natural Resources, Virginia
Angela Navarro, Deputy Secretary of Natural Resources, Virginia
Hon. Bob Goodlatte, Virginia 6th Congressional District
Hon. Morgan Griffith, Virginia 9th Congressional District
Hon. Evan Jenkins, West Virginia 3rd Congressional District

COMPANIES/ORGANIZATIONS COMMENTS

CO74 – Appalachian Mountain Advocates

Appalachian Mountain Advocates

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April 6, 2017

VIA ELECTRONIC FILING

Nathaniel J. Davis Sr., Deputy Secretary
The Federal Energy Regulatory Commission
888 First Street Northeast, Room 1A
Washington, District of Columbia 20426

RE: Atlantic Coast Pipeline, LLC; Dominion Transmission, Inc.; and Piedmont Natural Gas Company, Inc.,
Docket Nos. CP15-554-000, CP15-554-001, CP15-555-000, and CP15-556-000

Dear Mr. Davis:

Please accept these comments regarding the December 2016 Draft Environmental Impact Statement for the Atlantic Coast Pipeline (the Pipeline), submitted on behalf of Carlos Arostegui and Chad Oba (collectively, the Woods Corner Landowners), both of whom own property and reside near the proposed site for the Pipeline's Compressor Station 2 in Buckingham County, Virginia.

The Woods Corner Landowners have looked to and relied upon state and local land use regulations at crucial turning points in their lives—deciding where to put down roots, deciding whether to invest in improvements to their land, and deciding how best to finance other important life decisions. Therefore, while the Landowners acknowledge that local zoning regulations should not "prohibit or unreasonably delay" projects that have received formal Commission approval,[1] the Landowners strongly support the Commission's "long-standing precedent" of requiring certificate applicants obtain appropriate zoning permits[2] and its commitment to account for zoning concerns in determining whether a project is in the public interest.[3]

CO74-1 In light of this precedent, the Landowners wish to alert the Commission that, as proposed, Compressor Station 2 is not legally eligible for a zoning permit under the Buckingham County

1 *See Transcontinental Gas Pipe Line*, 141 FERC ¶ 61,091 (2012).

2 *See Pacific Connector Gas Pipeline, L.P.*, 134 FERC ¶ 61,102 (2011) (citing *Texas Eastern Transmission*, 121 FERC ¶ 61,003 (2007)).

3 *See Regulations Implementing Energy Policy Act of 2005; Pre-Filing Procedures for Review of LNG Terminals and Other Natural Gas Facilities*, Order No. 665, 113 FERC ¶ 61,015 (2005).

CO74-1 Comment noted.

CO74-1 (cont'd)

Zoning Ordinance and the proposal is therefore inconsistent with local land use regulations. The Zoning Ordinance is clear that only "*public utility* booster stations" may be sited within the County's A-1 Agricultural Zone[4]—a district which includes the proposed site for Compressor Station 2. By contrast, "gas *transmission* facilities" like Compressor Station 2 may be constructed only within the County's M-2 Industrial District.[5]

As the Commission has recognized, a Section 2(6)[6] natural gas pipeline company "is *not* a public utility,"[7] and state and local laws applicable to public utilities do not apply to companies like the Pipeline.[8] Similarly, Virginia law does not recognize the Pipeline as a "public utility," instead designating it a "non-utility gas service."[9] Therefore, while the County's Agricultural District is designed to permit the smaller, less land-intensive booster stations associated with water or gas distribution, the Ordinance plainly relegates to the County's Industrial District the larger, more land-intensive compressor stations used in natural gas transmission.

This common-sense distinction comports with the Commission's previous acknowledgments that gas transmission compressor stations are decidedly "industrial facilit[ies]" and are therefore capable of permanently injuring the character of an "agricultural/residential" or "rural residential area."[10] Accordingly, the Woods Corner Landowners thoroughly disagree with the Draft's current assessment that Compressor Station 2 is "consistent with the existing visual conditions in the area."[11] The Woods Corner / Union Hill neighborhood has been a valued agricultural area since the early nineteenth century. As this Commission has recognized in prior proceedings—proceedings, the Landowners note, wherein the Commission analyzed impacts from much smaller facilities[12]—this is precisely the sort of neighborhood that will be injured by industrial development.[13]

4 *See* Buckingham County Zoning Ordinance at 10–11 (emphasis added).

5 *Id.* at 35–36 (emphasis added).

6 15 U.S.C. § 717a(6).

7 *Transcontinental Gas Pipe Line*, 141 FERC ¶ 61,091 (emphasis added).

8 *Id.*

9 *See* Virginia Code §§ 56-265.1(b)(11), 56-265.4:6(A).

10 *Millennium Pipeline Company*, 140 FERC ¶ 61,045 (2012); Environmental Assessment for the Minisink Compressor Project, FERC Docket No. CP11-515-000, pp. 19, 21 (2012).

11 Draft Environmental Impact Statement at 4-341.

12 In terms of land impacted by construction, land permanently occupied, and operational horsepower, Compressor Station 2 will be more than four times the size of the Minisink Compressor Station. *Compare* Minisink Environmental Assessment at 2, 6; *with* Draft Environmental Impact Statement at 2-7, 2-16.

13 *Millennium Pipeline Company*, 140 FERC ¶ 61,045 (2012); Minisink Environmental Assessment at 19, 21 (2012).

CO74-1 (cont'd)

In any case, the Circuit Court for Virginia's Tenth Judicial Circuit in Buckingham County, Virginia, is currently reviewing whether Compressor Station 2 is legally eligible for a zoning permit at the proposed site. A declaratory action, filed on February 2, 2017, and docketed as *Arostegui v. Buckingham County Board of Supervisors et al.*, Case No. CL17000015, will resolve whether the Station is a "public utility booster station" eligible for a special use permit in the County's A-1 Agricultural zoning district, or whether it is a "gas transmission facility" permitted only in the County's M-2 Industrial District. A copy of the Complaint for Declaratory Relief in that case is enclosed as Attachment A to these comments.

The pending litigation makes it all the more imperative that the Commission "give proper consideration to logical alternatives" to the proposed site for Compressor Station 2.[14] No consideration has been given thus far to siting the Station in an appropriately-zoned district within Buckingham County. Furthermore, neighboring Appomattox County has zoned several areas intersecting the mainline of the Williams Transcontinental Pipeline as industrial sites under its own zoning laws. A copy of a map displaying those and other nearby industrially-zoned areas is enclosed as Attachment B to these comments.

For the reasons discussed above, the Woods Corner Landowners request that the Commission consider alternatives to the currently-proposed site for Compressor Station 2—including appropriately-zoned sites within Buckingham County as well as other appropriately-zoned sites in proximity to the Transcontinental Pipeline, thereby giving due consideration to the reasonable expectations of landowners who have invested significant resources and time in their properties under the auspices of a validly-enacted zoning ordinance.

Thank you,

Evan D. Johns
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(434) 529 - 6787
ejohns@appalmad.org

14 *Minisink Residents for Environmental Preservation and Safety v. Federal Energy Regulatory Commission*, 762 F.3d 97, 107 (D.C. Cir. 2014) (quoting *Northern Natural Gas Company v. Federal Power Commission*, 399 F.2d 953, 973 (D.C. Cir. 1968)).

Z-1181

ATTACHMENT A:

COMPLAINT FOR DECLARATORY RELIEF

CARLOS AROSTEGUI V. BUCKINGHAM COUNTY BOARD OF SUPERVISORS, ET AL.
Buckingham County Circuit Court Case No. CL17000015

February 2, 2017

COMPANIES/ORGANIZATIONS COMMENTS

CO74 – Appalachian Mountain Advocates (cont'd)

VIRGINIA:

IN THE CIRCUIT COURT FOR BUCKINGHAM COUNTY

CARLOS AROSTEGUI,

Plaintiff,

v.

THE BUCKINGHAM COUNTY BOARD OF SUPERVISORS,

and

ATLANTIC COAST PIPELINE, LLC;

Defendants.

Case No. CL17000015-00

Received and Filed in Buckingham Circuit Court
3/2/17, 2:20 AM/PM D.C.

COMPLAINT FOR DECLARATORY RELIEF

This is an action seeking declaratory relief regarding the Buckingham County Board of Supervisors' issuance of a special use permit for a proposed natural gas transmission compressor station. Because the permit was issued in violation of the Buckingham County Zoning Ordinance and the Virginia Code, and because the Board's decision was unreasonable, arbitrary, capricious, not fairly debatable, and injurious to actual and justiciable property interests, Plaintiff Carlos Arostegui respectfully requests this Court declare the permit to be void. In support of this request, Mr. Arostegui states:

PARTIES

A. Plaintiff Carlos Arostegui

1. Carlos Arostegui is a resident of Buckingham County, Virginia. Mr. Arostegui owns, resides on, and operates Whispering Creek Farm, a cattle and dairy farm located on an approximately 184-acre tract of land in the County's James River District, described as Tax Map Section 91, Lot 23 in the County's records. Mr. Arostegui purchased this property on

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October 31, 2003, and his decision to do so was largely influenced by his appreciation of the rural character of the area.

2. Mr. Arostegui's property is located approximately 2,175 feet from the parcel at issue in this action and in the underlying proceedings before the Buckingham County Planning Commission and Board of Supervisors.

B. Defendants

i. The Buckingham County Board of Supervisors

3. The Buckingham County Board of Supervisors is the governing body of Buckingham County, Virginia, and is comprised of seven Supervisors.

4. The Board is authorized to issue special use permits subject to the provisions of Title 15.2, Chapter 22 of the Code of Virginia and the provisions of the Buckingham County Zoning Ordinance. *See* Virginia Code §§ 15.2-2201, 15.2-2286(A)(3); Buckingham County Zoning Ordinance at 48.

ii. Atlantic Coast Pipeline, LLC

5. Atlantic Coast Pipeline, LLC, is a limited liability company organized and existing under the laws of the State of Delaware and created to develop, own, and operate the Atlantic Coast Pipeline, an approximately 564-mile-long interstate natural gas transmission pipeline system that includes an aboveground compressor station on a parcel (the Variety Shade Parcel) formerly owned by Variety Shade Landowners of Virginia, Inc.; located in the James River Magisterial District of Buckingham County, Virginia; and further described as Tax Map Section 91, Lot 60, containing approximately 68 acres.

6. Atlantic Coast Pipeline, LLC, is proposed to be a "natural gas pipeline company" within the meaning of the federal Natural Gas Act, 15 U.S.C. § 717, *et seq.*, and is therefore not a

public utility according to the Federal Energy Regulatory Commission (FERC). *See Transcontinental Gas Pipe Line Co.*, 141 FERC ¶ 61,091 (2012). Furthermore, Atlantic Coast Pipeline, LLC, is not now, nor will it be, engaged in the business of furnishing utility natural gas service or natural gas service to the general public. It is not regulated as to rates and service pursuant to Title 56 of the Code of Virginia. Furthermore, it is a foreign corporation under Article IX, Section 5 of the Constitution of Virginia, and is therefore not a public service company in the Commonwealth of Virginia.

7. The Plaintiffs believe that Atlantic Coast Pipeline, LLC, is or may be a person to be joined if feasible under Rule 3:12 of the Rules of the Supreme Court of Virginia and/or a necessary party to the proceedings under Virginia Code § 15.2-2314.

JURISDICTION AND VENUE

A. Jurisdiction

8. This Court has jurisdiction over declaratory judgment actions under Virginia Code § 8.01-184.

9. Furthermore, this Court has jurisdiction under Virginia Code § 15.2-2285(F) because this action was filed within thirty days of the Board's decision to grant a special exception.

B. Standing

10. Mr. Arostegui possesses interests adversely impacted by the Board's issuance of the January 11, 2017 special use permit for the Buckingham Compressor Station, creating an actual and justiciable controversy.

11. Mr. Arostegui is aggrieved by the Board's issuance of a special use permit for the Buckingham Compressor Station. Mr. Arostegui resides on, owns, and works on real property in close proximity to the Variety Shade Parcel. Mr. Arostegui therefore has a

"direct, immediate, pecuniary, and substantial interest" in the Board's decision to issue the permit.

12. As authorized by the special use permit, the Buckingham Compressor Station will harm Mr. Arostegui's personal and/or property rights and will impose burdens on him and his property different from any burdens suffered by the general public. These harms include diminution in property value; difficulty in selling or leasing his property; and interferences with his legitimate use and enjoyment of his property due to, among other things: increased noise audible on his property, physical trespass of pollutants onto his property, increased risk of health problems due to inhalation of pollutants on his property, intrusion of obnoxious odors onto his property, increased exposure to risk of personal and property damage by fire or explosion, increased farm and/or homeowners' insurance premiums, adverse impacts to viewsheds from his property, and/or adverse impacts to the rural and agrarian character of the area surrounding his property.

13. The harms identified above in paragraph 12 would affect only landowners and residents in relative proximity to the proposed Buckingham Compressor Station and are therefore not injuries shared by the general public.

14. Furthermore, the harms identified above in paragraph 12 are more severe for properties, like Mr. Arostegui's, that are used for agricultural and other outdoor activities or that would be marketed toward buyers interested in those activities.

15. The harms identified above in paragraph 12 result from the particular use of the Variety Shade Parcel for a gas transmission facility like the Buckingham Compressor Station. As contrasted with public utility booster stations, gas transmission compressor stations are significantly larger, operate at a significantly higher horsepower, produce significantly

more noise, emit significantly higher levels of pollution, and are less commonly associated with rural and agricultural areas. Furthermore, transmission pipelines like those served by the Buckingham Compressor Station are larger in diameter and operate under much higher pressures compared to pipelines operated by local distribution companies and other gas utilities. As such, the harms and potential harms identified above in paragraph 12 would be avoided or substantially mitigated if the Variety Shade Parcel were used for an actual "public utility booster or relay station" rather than a natural gas transmission compressor station.

16. In addition to the harms discussed above, Atlantic Coast Pipeline, LLC, proposes to install components of its transmission pipeline under Mr. Arostegui's property. Mr. Arostegui has not granted and does not intend to voluntarily grant an easement permitting the installation of those components. As such, Mr. Arostegui alleges, upon information and belief, that Atlantic Coast Pipeline, LLC, will seek to acquire an easement through eminent domain proceedings, which would encumber his property so as to allow the installation and operation of underground components. Mr. Arostegui further alleges, upon information and belief, that if the Buckingham Compressor Station were to be constructed and operated on an appropriately-zoned parcel rather than on the Variety Shade Parcel, Atlantic Coast Pipeline, LLC, would be required to reroute its transmission pipeline and that any revised route would not require the installation of components on his property. As such, construction and operation of the Buckingham Compressor Station on the Variety Shade Parcel is a but-for cause for the seizure and/or encumbering of his property through eminent domain. The Board's approval of the proposed Station is therefore a but-for cause of a particularized harm to Mr. Arostegui's property rights.

17. In addition, Mr. Arostegui is a Buckingham County taxpayer with standing to challenge the Board's *ultra vires* action.

C. Venue

18. Venue is proper in this Court under Virginia Code § 15.2-2285(F) because the Court has jurisdiction over the land affected by the challenged decision.

19. Venue is also proper in this Court under Virginia Code §§ 8.01-185 and 8.01-262 because the Board's principal office is located in Buckingham County and the causes of action arose in Buckingham County.

LEGAL FRAMEWORK

A. Dillon's Rule

20. Under Virginia law, county governments have only those powers that are: (a) expressly granted to them by the General Assembly, (b) necessarily or fairly implied from such express grants, or (c) are essential and indispensible. *Commonwealth v. County Board of Arlington*, 217 Va. 558, 574, 232 S.E. 2d 30, 40 (1977).

21. If there is any reasonable doubt whether a county government has a certain power, the doubt must be resolved against the county government. *Sinclair v. New Cingular Wireless PCS*, 283 Va. 567, 576, 727 S.E. 2d 40, 44 (2012).

B. The Virginia Planning, Subdivision of Land, and Zoning Act

22. The Virginia Planning, Subdivision of Land, and Zoning Act, Virginia Code §§ 15.2-2200, *et. seq.*, (the Zoning Act) "is intended to encourage localities to improve the public health, safety, convenience, and welfare of their citizens and to plan for the future development of communities" in order, in relevant part, "that the need for mineral resources and the needs of agriculture, industry, and business be recognized in future growth; . . . that residential areas be provided with healthy surroundings for family life; that agricultural and forestal

land be preserved; and that the growth of the community be consonant with the efficient and economical use of public lands." Virginia Code § 15.2-2200.

i. Article 2 – Local Planning Commissions

23. The Zoning Act authorizes county governments to establish local planning commissions "in order to promote the orderly development of the locality and its environs" by "serv[ing] primarily in an advisory capacity to the governing bod[y]." Virginia Code § 15.2-2210.

ii. Article 3 – The Comprehensive Plan

24. The Zoning Act requires that a local planning commission "prepare and recommend a comprehensive plan for the physical development of the territory within its jurisdiction" and that every governing body of a locality "adopt a comprehensive plan for the territory under its jurisdiction." Virginia Code § 15.2-2223(A).

25. A comprehensive plan must include "the locality's long-range recommendations for the general development of the territory covered by the plan"—including the "designation of areas for various types of public and private development and use, such as different kinds of residential, including age-restricted, housing; business; industrial; agricultural; mineral resources; conservation; active and passive recreation; public service; flood plain and drainage; and other areas." Virginia Code § 15.2-2223(C).

26. Once a locality adopts a comprehensive plan, "no . . . public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established, or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to and approved by

the [local planning] commission as being substantially in accord with the adopted comprehensive plan or part thereof." Virginia Code § 15.2-2232(A).

27. Once the local planning commission has made a determination as to the accordance or non-accordance of the public utility facility with the comprehensive plan, the commission must "communicate its findings to the governing body, indicating its approval or disapproval with written reasons therefor." Virginia Code § 15.2-2232(B).

28. The governing body may then overrule the local planning commission's determination by a vote of a majority of the governing body's membership. Virginia Code § 15.2-2232(B).

iii. Article 7 – Zoning

29. The Zoning Act also authorizes the governing bodies of local governments to divide the territory under their jurisdiction into districts of such number, shape, and area as it may deem best to carry out the purposes of zoning and to "regulate, restrict, permit, prohibit, and determine" both (a) the "use of land, buildings, structures and other premises for agricultural, business, industrial, residential, flood plain and other specific uses" and (b) the "size, height, area, bulk, location, erection, construction, reconstruction, alteration, repair, maintenance, razing, or removal of structures." Virginia Code § 15.2-2280.

30. The Zoning Act defines a "special exception" as "a special use that is not permitted in a particular district except by a special use permit granted under the provisions of th[e Zoning Act] and any zoning ordinances adopted" under the Act. Virginia Code § 15.2-2201.

31. Under Virginia law, the terms "special exception" and "special use permit" are interchangeable. *Board of Supervisors of Fairfax County v. Southland Corp.*, 224 Va. 514, 521, 297 S.E. 2d 718, 721 (1982).

32. The Zoning Act allows counties to include within zoning ordinances "reasonable regulations and provisions . . . [f]or the granting of special exceptions under suitable regulations and safeguards." Virginia Code § 15.2-2286(A)(3).

33. One of the "reasonable regulations and provisions" a county can include in its zoning ordinance is a provision reserving unto the county's governing body "the right to issue . . . special exceptions." Virginia Code § 15.2-2286(A)(3).

34. However, a county's governing body cannot issue a special exception in violation of the applicable zoning ordinance. Any such special exception is, as a matter of law, "arbitrary and capricious, and not fairly debatable, thereby rendering [it] void and of no effect." *Newberry Station Homeowners Association v. Board of Supervisors of Fairfax County*, 285 Va. 604, 621, 740 S.E.2d 548, 557 (quoting *Renkey v. Arlington County Board*, 272 Va. 369, 376, 634 S.E.2d 352, 356 (2006)). Any action by the governing body on a special use permit application "must be taken within the framework of the zoning ordinances and state statutes on zoning." *Cole v. City Council of Waynesboro*, 218 Va. 827, 838, 241 S.E. 2d 765, 772 (1978).

C. The Buckingham County Comprehensive Plan

35. On or about September 14, 2015, the Buckingham County Board of Supervisors adopted the Buckingham County Comprehensive Plan 2015 – 2020.

36. The Comprehensive Plan states that rural, agricultural, and forestry areas "are located the furthest distance from the County's centralized public services, creating public safety concerns about dangerously long response times for fire, rescue, and law enforcement." Comprehensive Plan at 187.

37. The Comprehensive Plan also states that "[p]rotecting and preserving farmland, forest uses, livestock operations, wetlands, significant wildlife habitats, and water resources are of primary importance" in rural, agricultural, and forestry areas. Comprehensive Plan at 187.

D. The Buckingham County Zoning Ordinance

38. The Buckingham County Board of Supervisors has enacted the Buckingham County Zoning Ordinance under Virginia Code § 15.2-2280.

39. The Zoning Ordinance provides that its "stated and express purpose [is] to create land use regulations which shall encourage the realization and implementation of the Comprehensive Plan." Buckingham County Zoning Ordinance at 8. "To this end, development is: to be encouraged to take place in clusters to promote efficient and cost effective use of land; to be situated so as to make possible future economics in the provision of services by the public and private sections; and to be so located as to protect the watershed, protect surface and groundwater supplies, discourage development in flood plains, wetlands, and conservation areas." *Id.*

40. Consistent with these purposes, the Buckingham County Zoning Ordinance divides the County into fourteen distinct zoning districts, two of which are relevant in this action.

i. District 1 — Agricultural District (A-1)

41. The Buckingham County Zoning Ordinance establishes District 1 — Agricultural District (A-1) "for the purpose of preserving and promoting rural land uses. These include forestall lands, areas significant for the environment such as lakes, reservoirs, streams, parks, and less intensive farming operations that are more traditional in character." Buckingham County Zoning Ordinance at 9.

42. The Zoning Ordinance provides that the A-1 Agricultural District is "established for the

purpose of facilitating existing and future farm operations traditionally found in Buckingham County; preserving farm and forest lands; conserving water and other natural resources; reducing soil erosion; preventing water pollution; protecting watersheds; and reducing hazards from flood and fire." Buckingham County Zoning Ordinance at 9.

43. The Buckingham County Zoning Ordinance states that the intent of the Board in establishing the A-1 Agricultural District is "to discourage the random scattering of residential, commercial, or industrial uses." Buckingham County Zoning Ordinance at 9.

44. The A-1 Agricultural District is an "inclusive" district, meaning it "permits only those [land] uses specifically named" therein. *See Board of Supervisors of Madison County v. Gaffney*, 244 Va. 545, 550, 422 S.E. 2d 760, 763 (1992). Accordingly, "the burden is on the property owner to show that the use he proposes is one that is included or permitted" within the District. *Board of Supervisors of Fairfax County v. Board of Zoning Appeals of Fairfax County*, 271 Va. 336, 349, 626 S.E. 2d 374, 382 (2006).

45. The Buckingham County Zoning Ordinance provides that "public utility booster or relay stations" is a use permitted in the A-1 Agricultural District by "a Special Use Permit following recommendation by the Planning Commission in accordance with [the Buckingham Zoning Ordinance] and the Code of Virginia." Buckingham County Zoning Ordinance at 11–12.

46. The Buckingham Zoning Ordinance does not list "gas transmission facility" or "non-utility booster station," as a use permitted by right or by special use permit within the A-1 Agricultural District.

ii. District 6 — Industrial District–Heavy (M-2)

47. The Buckingham Zoning Ordinance establishes District 6 — Industrial District–Heavy

(M-2) to authorize "industries which have a public nuisance potential and will be subject to intensive review for locational impact on surrounding land uses and environment." Buckingham County Zoning Ordinance at 35.

48. The Buckingham Zoning Ordinance provides that "Oil Gas Transmission Facility" is a use "permitted only by special use permit" in the M-2 Heavy Industrial District. Buckingham County Zoning Ordinance at 36.

iii. Permitting Procedures

49. The Buckingham County Zoning Ordinance requires that all "[b]uildings or structures shall be started, reconstructed, enlarged, or altered only after a zoning permit has been obtained" from the County Zoning Administrator. Buckingham County Zoning Ordinance at 48.

50. "If[,] in the Administrator's judgment, the proposed construction constitutes a special use for the district in which the construction lies, the application for a zoning permit shall be referred to the Planning Commission, which shall meet within 30 days to consider the application. A public hearing shall be held at which parties in interest and citizens shall have an opportunity to be heard." Buckingham County Zoning Ordinance at 49. "The Commission shall transmit a recommendation based on its consideration of the application to the Board of Supervisors not more than 30 days after the public hearing(s)." *Id.* The County Board of Supervisors shall then "hold a public hearing and shall either approve or deny the application." *Id.*

51. The Buckingham Zoning Ordinance provides that if, on the other hand, "a use is not specifically permitted and an application is made by a property owner to the Administrator for such use, the Administrator shall refer the application to the Planning Commission which shall make its recommendations to the governing body within sixty (60) days. If the recommendation of the Planning Commission is approved by the governing body, the

ordinance shall be amended to list the use as a permitted use in that district, henceforth. Both the Planning Commission and Board of Supervisors shall hold a public hearing after advertising in accordance with [Virginia Code] Section 15.2-2204." Buckingham County Zoning Ordinance at 49.

52. Section 15.2-2204 requires that any amendments to a zoning ordinance be advertised "once a week for two successive weeks in some newspaper published or having general circulation in the locality." Such an advertisement must include a "descriptive summary of the proposed action and a reference to the place or places within the locality where copies of the proposed . . . amendment[ ] may be examined."

E. The Virginia Declaratory Judgments Act

53. The Virginia Declaratory Judgments Act, Virginia Code §§ 8.01-184, *et seq.*, authorizes circuit courts to "make binding adjudications of right, whether or not consequential relief is, or at the time could be, claimed." Virginia Code § 8.01-184. These adjudications may include resolving "[c]ontroversies involving the interpretation of . . . statutes, municipal ordinances and other governmental regulations." *Id.*

54. The Declaratory Judgments Act allows circuit courts to grant "further relief based on a declaratory judgment order or decree . . . whenever necessary or proper." Virginia Code § 8.01-186.

FACTUAL BACKGROUND

A. Background on the Natural Gas Pipeline System

55. The United States' natural gas pipeline system is comprised of three distinct industries:

    a. Production, which includes gathering systems that transport raw natural gas from production wells to processing plants or larger transmission systems;

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b. Transmission, which includes high-pressure, large diameter pipelines, compressor stations, and metering facilities that connect field production and processing operations with local distribution companies; and

c. Distribution, which includes smaller-diameter pipelines for mains and services and other infrastructure to receive high-pressure gas from transmission pipeline, reduce the pressure, and deliver the gas to end-use consumers.

The United States Department of Commerce categorizes those three industries as separate and distinct industries—belonging to separate and distinct industrial groups, subsectors, and sectors—in its North American Industry Classification System (NAICS), the standard used by federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data.

56. Transmission pipeline systems operate on a much larger scale than distribution pipeline systems. As compared to distribution pipeline systems, transmission pipelines are much larger in diameter and operate under much higher pressures.

57. Gas production, transmission, and distribution systems all use compressor or "booster stations" to varying degrees. These stations are comprised of equipment that helps adjust the pressure and flow of gas through a pipeline system and auxiliary equipment and buildings associated with that task.

58. While both gas transmission systems and gas distribution systems may include booster stations, booster stations associated with gas distribution systems are much smaller than those used in interstate gas transmission systems. Distribution booster stations also produce lower levels of noise and air pollution than transmission booster stations. In addition, distribution booster stations don't typically include large supervisory control and data

acquisition (SCADA) system towers, like those associated with transmission booster stations.

59. Due to their larger size, higher levels of noise and air pollution, and greater impact to viewsheds, gas transmission compressor stations have a much higher nuisance potential than gas distribution booster stations.

60. Because they distribute natural gas to end-use consumers, natural gas distribution networks in Virginia provide utility gas service and are operated by public utilities. Conversely, natural gas transmission pipelines are not considered "public utilities" under state and local laws. *City of San Benito v. Kinder Morgan Tejas Pipeline*, 411 F. Supp. 2d 683, 688 (S.D. Texas 2006) (gas pipeline that was "not a local distribution line . . . serv[ing] the residents" of city was not a "public utility" under city's ordinance); *Transcontinental Gas Pipe Line Co.*, 141 FERC ¶ 61,091 (November 2, 2012) (interstate natural gas transmission pipelines are not public utilities and are therefore exempt from state laws regarding public utilities).

B. The Proposed Atlantic Coast Pipeline

61. Atlantic Coast Pipeline, LLC, is currently seeking approval from the Federal Energy Regulatory Commission (FERC) to construct the Atlantic Coast Pipeline—described in filings before FERC as "a proposed interstate natural gas transmission system that will serve the growing energy needs of multiple public utilities and local distribution companies in Virginia and North Carolina."

62. In filings before FERC, Atlantic Coast Pipeline, LLC, has stated that the Pipeline will transmit natural gas through pipes up to 42 inches in diameter and under pressures up to 1,400 pounds per square inch gauge (psig).

63. The Pipeline's customers are all electric generation or local gas distribution companies in North Carolina and Virginia. The Pipeline will not furnish natural gas to the general public, nor are members of the general public entitled as a matter of right to use the Pipeline's facilities. Although Atlantic Coast Pipeline, LLC, has suggested the Pipeline may also indirectly provide natural gas to specific, industrial users, proposals to do so have included the provision of natural gas to those industrial users by local distribution companies or other natural gas utilities rather than by Atlantic Coast Pipeline, LLC, itself.

64. The Pipeline's rates will not be regulated the Virginia State Corporation Commission, nor will the pipeline be a "public service company" under Virginia law.

65. As proposed, the Pipeline will be a "non-utility gas service"—rather than a "natural gas utility"—under the Virginia Utility Facilities Act, Virginia Code §§ 56-265.1, *et seq.*

66. FERC has not issued a certificate of public convenience and necessity approving the Pipeline project.

C. The Proposed Buckingham County Compressor Station

67. As part of the Pipeline project, Atlantic Coast Pipeline, LLC, has proposed to construct and operate a compressor station on the Variety Shade Parcel, which is located within the Buckingham County Zoning Ordinance's A-1 Agricultural District and is approximately 2,175 feet from Mr. Arostegui's property.

68. As proposed, the Buckingham Compressor Station would house multiple natural gas-fired turbines with a combined horsepower of up to 55,000 under standard conditions.

69. In addition to the natural gas-fired turbines, the Buckingham Compressor Station proposal includes various buildings, an auxiliary generator, a tank farm, multiple gas coolers,

multiple gas heaters, blow-down and exhaust silencers, a pipeline launcher and receiver, multiple filters/separators, and a microwave communications tower.

70. Atlantic Coast Pipeline, LLC, has not disclosed the size of the microwave communications tower associated with the Buckingham Compressor Station, stating elsewhere that "design of [its] microwave tower network is still under design."

71. According to filings before FERC and the Virginia Department of Environmental Quality, the proposed Buckingham Compressor Station would emit up to 50.2 tons per year of nitrogen oxides, 95.2 tons per year of carbon monoxide, 32.7 tons per year of volatile organic compounds, 7.33 tons per year of sulfur dioxide, 43.9 tons per year of particulate matter, and 5.63 tons per year of other air pollutants categorized as "hazardous air pollutants" (HAPs) under the Clean Air Act, 42 U.S.C. §§ 7401, *et seq.*, or as "air toxics" under the Virginia State Air Pollution Control Law, Virginia Code §§ 10.1-1300, *et seq.*

72. Nitrogen oxides and volatile organic compounds react in the presence of sunlight to form ground-level ozone, which can trigger a variety of health problems including chest pain, coughing, throat irritation, and airway inflammation. It can also reduce lung function; harm lung tissue; and worsen bronchitis, emphysema, and asthma, leading to increased medical care. People most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers like Mr. Arostegui.

73. Carbon monoxide can cause harmful health effects by reducing oxygen delivery to organs, including the heart and brain, and tissues. For people with a reduced capacity for pumping oxygenated blood to the heart due to various forms of heart disease, short-term exposure to

carbon monoxide further affects their body's already-compromised ability to respond to the increased oxygen demands of exercise or exertion.

74. Particulate matter is comprised of microscopic solids or liquid droplets small enough to be inhaled and introduced into the lungs or bloodstream, potentially causing serious health problems. Particulate matter pollution may also cause reduced visibility.

75. HAPs and air toxics are air pollutants reasonably anticipated to result in an increase in mortality or an increase in serious, irreversible, or incapacitating reversible, illness. The HAP most commonly associated with combustion of natural gas is formaldehyde, a carcinogen and a skin, eye, nose, and throat irritant.

76. The air pollutants emitted by the Buckingham Compressor Station will physically trespass onto Mr. Arostegui's property, and operation of the Station will increase the concentration of air pollutants on Mr. Arostegui's property.

77. According to filings before FERC and documents produced by FERC, the Buckingham Compressor Station will also result in an increase in audible noise at nearby residences.

78. According to documents produced by FERC, transmission compressor stations like the Buckingham Compressor Station are "industrial facilit[ies]" that may negatively impact the character of an "agricultural/residential" or "rural residential area." *See Millenium Pipeline Company, LLC*, 140 FERC ¶ 61,045 (2012); Environmental Assessment for the Minisink Compressor Project, FERC Docket No. CP11-515-000 (2012). In addition, FERC recognizes that compressor stations associated with natural gas transmission pipelines generally "result in permanent change in the visual appearance of the project areas and result in long-term impacts on visual resources." *Id.* at 21.

79. Documents produced by FERC also recognize "the general potential for property values to be negatively impacted by the construction of nearby energy infrastructure" and that "proximity to [a] proposed compressor station could have an impact on property values." *Millenium Pipeline Company, LLC*, 140 FERC ¶ 61,045 (2012).

80. While the Buckingham County Comprehensive Plan does refer to the proposed Atlantic Coast Pipeline, it does not mention a compressor station or any aboveground facilities associated with the Pipeline, and no such feature is shown on the adopted master plan or any part thereof.

D. Procedural History

i. The Special Use Permit Application

81. On or about July 6, 2016, Atlantic Coast Pipeline, LLC, submitted an "Application for a Special Use Permit" to the Buckingham County Zoning Administrator for a "Natural Gas Compressor Station and associated appurtenances" on the Variety Shade Parcel and within the Buckingham County Zoning Ordinance's A-1 Agricultural District. The Special Use Permit Application did not state the designated special land use under which the request was made.

82. On or about August 22, 2016, the Zoning Administrator referred the Special Use Permit Application to the Buckingham County Planning Commission as Case No. 16-SUP236, noting that "[t]he Agriculture District (A-1) requires that utility generating, boosting, relaying, etc. stations must obtain a [special use permit]."

ii. Proceedings Before the Planning Commission

83. On September 26, 2016, the Buckingham County Planning Commission convened a public hearing on Case No. 16-SUP236.

84. The Planning Commission reconvened its public hearing on October 17, 2016, and again on October 24, 2016.

85. Mr. Arostegui appeared in person before the Planning Commission at its October 17, 2016 hearing, commenting that the proposed Station was not a land use permitted in the A-1 Agricultural District and that the County could therefore grant the permit application only if the Station was to be located in an area designated as part of the M-2 Heavy Industrial District. Other members of the public provided similar comments to the Planning Commission at the September 26, October 17, and October 24, 2016 hearings, noting that the proposed Station was not a "public utility booster or relay station" but was instead a "gas transmission facility."

86. On November 21, 2016, the Planning Commission voted to transmit a recommendation to the Board of Supervisors to approve the permit application in Case No. 16-SUP236. In so deciding, the Planning Commission did not address the comments provided by Mr. Arostegui and others regarding the facility's status as a "gas transmission facility" rather than a "public utility booster or relay station" or regarding Atlantic Coast Pipeline, LLC's status as a "non-utility gas service provider" rather than a "public utility."

iii. Proceedings Before the Board of Supervisors

87. On January 5, 2017, the Board of Supervisors convened a public hearing on Case No. 16-SUP236. Multiple members of the public again advised the Board that the proposed Station was not a "public utility booster or relay station" and, therefore, was not a permitted use in the A-1 Agricultural District.

88. At the conclusion of the January 5, 2017 hearing, the Board voted to issue the special use permit. The Board did not address the comments provided by Mr. Arostegui and others regarding the facility's status as a "gas transmission facility" rather than a "public utility

booster or relay station" or regarding Atlantic Coast Pipeline, LLC's status as a "non-utility gas service provider" rather than a "public utility."

iv. The Final Permit

89. On or about January 11, 2017, the Board of Supervisors issued a special use permit to Atlantic Coast Pipeline, LLC, permitting the "construction and operation of a Compressor Station on tax map 91-60."

90. The special use permit provides that the "only use of the property shall be compression, measurement and regulation of natural gas and its transfer above ground and underground, except that a Microwave Tower shall be permitted provided a separate [special use permit] is approved by the Board."

91. The special use permit also provides, however, that "[n]othing in this approval shall be deemed to obligate the County to . . . grant any permits or approvals except as may be directly related hereto, i.e. microwave tower."

92. The special use permit states that, aside from the "compression, measurement and regulation of natural gas and its transfer above ground and underground" and aside from a microwave tower, "[n]o *other non A-1 use* shall be made of the property." (Emphasis added).

93. The County has issued no other formal authorization or approval of the proposed Buckingham Compressor Station, including any authorization or approval under Virginia Code § 15.2-2232.

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CLAIMS FOR RELIEF

FIRST CLAIM FOR RELIEF:
VIOLATION OF THE BUCKINGHAM COUNTY ZONING ORDINANCE

94. The Plaintiffs incorporate by reference all allegations contained above in paragraphs 1 through 93.

95. The A-1 Agricultural District of the Buckingham County Zoning Ordinance is an inclusive zoning district, meaning that the Ordinance "permits only those [land] uses specifically named" in the relevant provisions of the Ordinance. *See Board of Supervisors of Madison County v. Gaffney*, 244 Va. 545, 550, 422 S.E. 2d 760, 763 (1992).

96. The Buckingham County Zoning Ordinance permits "public utility booster or relay stations" within the A-1 Agricultural District, provided the applicant receives a special exception from the Board.

97. The proposed Buckingham Compressor Station is not a "public utility booster or relay station" because Atlantic Coast Pipeline, LLC, is not a public utility and because the Station is not a component of a public utility distribution system or other system providing utility gas service under Virginia law. The proposed Buckingham Compressor Station is, instead, a non-public utility booster station and/or a gas transmission facility.

98. The Buckingham Zoning Ordinance does not permit gas transmission facilities within the A-1 Agricultural District—either by right or by special permit from the Board of Supervisors. The Ordinance permits those facilities only by special permit in the M-2 Heavy Industrial District.

99. The Buckingham Zoning Ordinance does not permit non-public utility booster or relay stations within the A-1 Agricultural District—either by right or by special permit from the Board of Supervisors.

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100. Accordingly, the proposed use of the Variety Shade Parcel within the A-1 Agricultural District for the operation and construction of the Buckingham Compressor Station is an unpermitted use under the Zoning Ordinance.

101. The Board therefore violated the Zoning Ordinance by issuing the January 11, 2017 special use permit for the Buckingham Compressor Station.

SECOND CLAIM FOR RELIEF:
ULTRA VIRES ACTION ON SPECIAL USE PERMIT APPLICATION

102. The Plaintiffs incorporate by reference all allegations contained above in paragraphs 1 through 101.

103. Virginia Code § 15.2-2201 requires that the Board grant special use permits only according to "the provisions of [the Zoning Act] and any zoning ordinances adopted" under the Act.

104. The General Assembly has not granted the Board the authority to grant special use permits that violate the provisions of the Zoning Act or the provisions of any zoning ordinances adopted under the Act.

105. The Buckingham County Zoning Ordinance is a zoning ordinance adopted under the Zoning Act. The Board is therefore authorized to grant special use permits only according to the provisions of the Zoning Ordinance.

106. As detailed above in paragraphs 95 through 101, the Zoning Ordinance does not permit the issuance of a special use permit for a non-public utility booster or relay station or for a gas transmission facility within the A-1 Agricultural District.

107. The Board therefore exceeded the powers granted to it under Virginia Code § 15.2-2201 by issuing the January 11, 2017 special use permit for the proposed Buckingham Compressor

Station—which is a non-public-utility booster or relay station and/or a gas transmission facility—within the A-1 Agricultural District.

108. The Board also exceeded the powers granted to it under Virginia Code § 15.2-2201 by failing to follow the Zoning Ordinance's procedures for authorizing a land use that is not specifically permitted within the proposed zoning district.

109. In the alternative—and assuming *arguendo* that the Buckingham Compressor Station *is* a public utility booster station—the Board exceeded the powers granted to it under Virginia Code § 15.2-2201 by issuing the special use permit in violation of the Zoning Act's requirement that no public utility facility be authorized unless: (A) the "general location or approximate location, character, and extent thereof has been submitted to and approved by the [local planning] commission as being substantially in accord with the adopted comprehensive plan or part thereof"; (B) the local planning commission "communicate[s] its findings to the governing body . . . with written reasons therefor"; and (C) the governing body approves the facility. *See* Virginia Code § 15.2-2232.

110. The Board's issuance of the January 11, 2017 special use permit was therefore an *ultra vires* act and the permit is void *ab initio*. *See School Board of Amherst County v. Burley*, 255 Va. 376, 378–79, 302 S.E.2d 53, 55 (1983).

THIRD CLAIM FOR RELIEF:
UNREASONABLE, ARBITRARY, CAPRICIOUS, AND NOT FAIRLY DEBATABLE ACTION ON SPECIAL USE PERMIT APPLICATION

111. The Plaintiffs incorporate by reference all allegations contained above in paragraphs 1 through 110.

112. As detailed above in paragraphs 95 through 101, Atlantic Coast Pipeline's permit application failed to meet the requirements of the Buckingham County Zoning Ordinance

for the issuance of a special use permit in the A-1 Agricultural District. The Board's issuance of the January 11, 2017 special use permit for the Buckingham Compressor Station was therefore unreasonable, arbitrary, capricious, and not fairly debatable. *Newberry Station Homeowners Association v. Board of Supervisors of Fairfax County*, 285 Va. 604, 621, 740 S.E.2d 548, 557 (quoting *Renkey v. Arlington County Board*, 272 Va. 369, 376, 634 S.E.2d 352, 356 (2006)).

113. Furthermore, the Board's issuance of the January 11, 2017 special use permit for the Buckingham Compressor Station was unreasonable, arbitrary, capricious, and not fairly debatable because the Board could not assess the impact of the Station on the property values of nearby properties, the impact of the Station on the viewsheds from nearby properties, the impact of the Station on the nature and character of the surrounding area, and the Station's conformity with the Buckingham County Comprehensive Plan without further information on the proposed microwave communication tower—including, notably, the tower's height and, therefore, how visible it would be from nearby properties and other surrounding viewpoints.

114. Furthermore, the Board's issuance of the January 11, 2017 special use permit for the Buckingham Compressor Station was unreasonable, arbitrary, capricious, and not fairly debatable because the applicant failed to carry its burden of "show[ing] that the use [it] propose[d] is one that is included or permitted" in the A-1 Agricultural District by the Buckingham County Zoning Ordinance. *See Board of Supervisors of Fairfax County v. Board of Zoning Appeals of Fairfax County*, 271 Va. 336, 349, 626 S.E. 2d 374, 382 (Va. 2006). Atlantic Coast Pipeline, LLC, failed to provide the Planning Commission or the Board with any evidence, testimony, or other statement suggesting either (a) that it was a

public utility or (b) that its proposed Buckingham Compressor Station was a *public utility* booster station as opposed to a natural gas transmission booster station.

115. Furthermore, the Board's issuance of the January 11, 2017 special use permit for the Buckingham Compressor Station was unreasonable, arbitrary, capricious, and not fairly debatable because neither the Planning Commission nor the Board addressed the fact that the applicant's proposed use was not a "public utility" booster station—a deficiency raised by public commenters, including Mr. Arostegui, in both written and oral comments to both bodies. *See Motor Vehicle Manufacturers Association v. State Farm Mutual Auto Insurance*, 463 U.S. 29, 43 (1983) (action is arbitrary and capricious if it "entirely fail[s] to consider an important aspect of the problem"). *See also Perez v. Mortgage Bankers Association*, 135 S. Ct. 1199, 1203 (2015) (requirement that legislative action be subject to public comment includes requirement that decisionmaker "consider and respond to significant comments received during the period for public comments").

116. Because, as detailed above in paragraphs 112 through 115, the Board's issuance of the January 11, 2017 special use permit for the Buckingham Compressor Station was unreasonable, arbitrary, capricious, and not fairly debatable, the Board's decision and the permit are void and of no effect. *Newberry Station Homeowners Association v. Board of Supervisors of Fairfax County*, 285 Va. 604, 621, 740 S.E.2d 548, 557 (quoting *Renkey v. Arlington County Board*, 272 Va. 369, 376, 634 S.E.2d 352, 356 (2006)).

RELIEF REQUESTED

Based on the facts and law discussed above, Mr. Arostegui respectfully asks this Court to:

(a) declare that the proposed Buckingham Compressor Station is not a public utility booster station and is not among the land uses permitted in the A-1 Agricultural Zoning District by the Buckingham County Zoning Ordinance;

(b) declare that the Board of Supervisors acted beyond the scope of its authority by issuing the January 11, 2017 special use permit for the Buckingham Compressor Station in violation of the Buckingham County Zoning Ordinance and the Zoning Act;

(c) declare that the Board of Supervisors acted arbitrarily, capriciously, and beyond fair debate as to reasonableness in issuing the January 11, 2017 special use permit for the Buckingham Compressor Station in violation of the Buckingham County Zoning Ordinance and without further information about the microwave communications tower associated with the Station;

(d) declare that the January 11, 2017 special use permit for the Buckingham Compressor Station is *void ab initio*, or otherwise vacate, void, nullify, invalidate, or revoke the permit; and

(e) grant any other relief this Court deems appropriate.

Respectfully submitted,

EVAN D. JOHNS (Virginia State Bar No. 89285)
ISAK HOWELL (Virginia State Bar No. 75011)
APPALACHIAN MOUNTAIN ADVOCATES
415 Seventh Street Northeast
Charlottesville, Virginia 22902
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ihowell@appalmad.org

Counsel for Carlos Arostegui

COMPANIES/ORGANIZATIONS COMMENTS

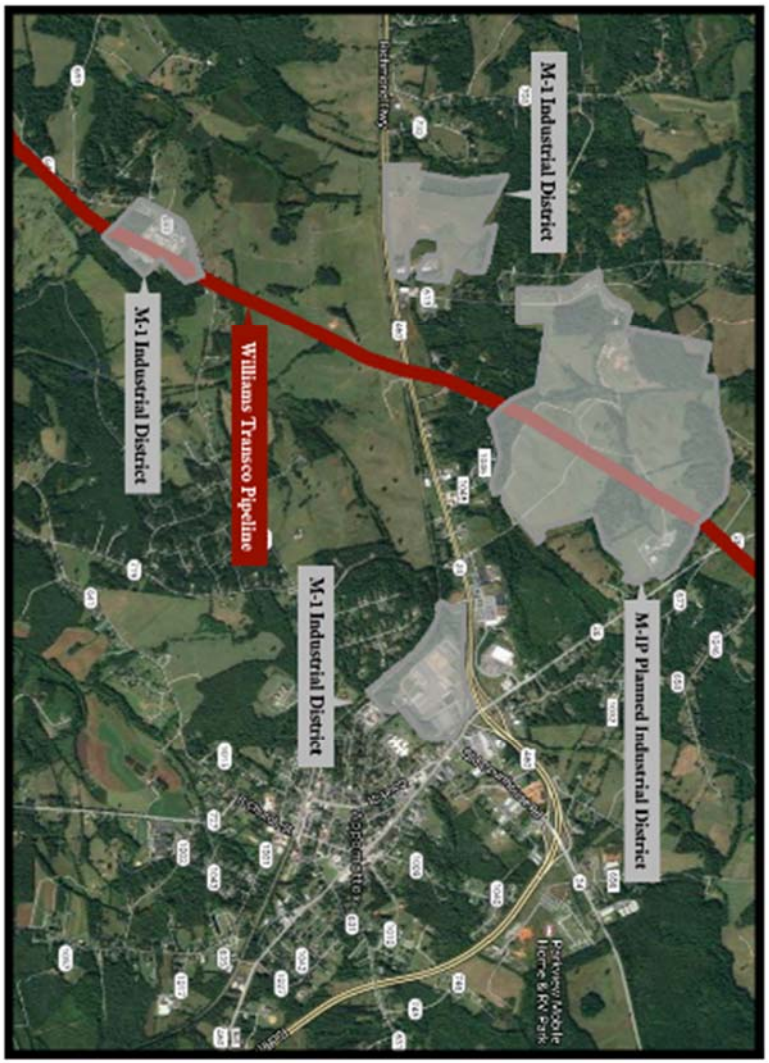
CO74 – Appalachian Mountain Advocates (cont'd)

ATTACHMENT B:

MAP OF ALTERNATIVE, INDUSTRIALLY-ZONED PROPERTIES INTERSECTING WILLIAMS TRANSCONTINENTAL PIPELINE

COMPANIES/ORGANIZATIONS COMMENTS

CO74 – Appalachian Mountain Advocates (cont'd)



COMPANIES/ORGANIZATIONS COMMENTS

CO75 – International Union of Operating Engineers

International Union of Operating Engineers

AFFILIATED WITH THE AMERICAN FEDERATION OF LABOR AND CONGRESS OF INDUSTRIAL ORGANIZATIONS

April 6, 2017

Mr. Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

RE: Atlantic Coast Pipeline & Supply Header Projects
FERC Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000

Dear Mr. Davis:

CO75-1

The International Union of Operating Engineers respectfully submits the following comments regarding the Draft Environmental Impact Statement for the proposed Atlantic Coast Pipeline and Supply Header Projects.

The International Union of Operating Engineers (IUOE) represents heavy equipment operators and mechanics in the construction industry throughout the United States and Canada. A large cadre of IUOE members possess specialized training and years of practical experience building the nation's energy infrastructure that powers our country, including such notable projects as the Hoover dam, the Trans-Alaska Pipeline, and countless power plants and pipelines.

The International Union of Operating Engineers is one of four labor unions signatory to the National Pipeline Agreement with the Pipe Line Contractors of America (PLCA). It is through this agreement that skilled pipeline workers will build this key piece of Mid-Atlantic energy infrastructure.

Thousands of members of the Operating Engineers Union hope to put their skills and expertise to work building the Atlantic Coast Pipeline Project. Their livelihood depends on the determination made by the Federal Energy Regulatory Commission (FERC) regarding the site certificate.

The Atlantic Coast Pipeline is a 600-mile energy-infrastructure project would begin in Harrison County, West Virginia and travel southeast through Virginia and then proceed south to Robeson County, North Carolina and serve the energy needs for the states of Virginia and North Carolina. Three compressor stations, which help maintain the flow of gas, are proposed in Lewis County, West Virginia; Buckingham County, Virginia; and Northampton County, North Carolina.

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CO75-1 Comment noted.

CO75-1 (cont'd)

During construction, the project is also estimated to generate $2.7 billion in total economic activity and support 17,240 jobs. Additionally, capital expenditures during construction will generate $4.2 million annually in total tax revenue paid to local governments. The utilities' payment of property taxes through all the various localities it passes through could result in nearly $30 million annually by 2022. Furthermore, the lower cost of natural gas to fuel power generation lowers energy bills. Virginia and North Carolina electricity consumers could save up to $377 million annually.

The Operating Engineers commend FERC staff for their comprehensive response to potential issues regarding pipeline construction near "karst" formations.

The ACP will cross 32.5 miles, and the Supply Header Project (SHP) will cross 1.1 miles of karst terrain. Pipeline opponents have claimed that pipeline construction near karst (underground limestone formations, including sinkholes) could potentially produce erosion, and even pipeline failure because of the instability of the subsurface.

The DEIS correctly states that approximately 50 percent of the terrain in the pipeline's vicinity includes karst formations, and that thousands of miles of pipelines have been built and operated in and near these and other karst features with few problems. For these reasons, it is unlikely this or any other pipelines will experience karst-induced problems.

However DEIS also includes additional protective measures. The DEIS contains a lengthy Appendix I, which outlines a Karst Mitigation Plan. The Plan's requirements include extensive pre-project site reviews by certified specialists in identifying karst formations, continuous monitoring of the construction area for karst activity, including features that may form during pipeline installation, and compliance with the Virginia Cave Board's "Karst Assessment Standard Practice" will provide additional protections against the unlikely occurrence of a karst event.

The Operating Engineers would prefer a more comprehensive discussion in the DEIS about the project's cumulative air quality impacts. The DEIS asserts that the pipeline's cumulative impacts should include the air emissions from two non-jurisdictional natural gas fired power plants. (Page. 4-508, Table 4.13.3-2.)

It is true that the ACP will supply fuel to new gas-fired power plants which will produce air emissions. The DEIS, however, did not clearly illustrate how these and other new gas-fired power plants are actually replacing several coal fired plants, and producing a net decrease in emissions, both in toxic air pollutants and in greenhouse gasses.

CO75-1 (cont'd)

For instance, the DEIS lists the non-jurisdictional gas-fired Brunswick Power Station, a 1,358-megawatt gas-fired power plant's as producing 1,550 tons per year of air emissions. Yet the Brunswick Power Station's start-up will be accompanied by shutdowns of two coal-fired power plants in Eastern Virginia.

Duke Power's shutdown of the coal fired Ashville power plant, which is only one-third as large as the Brunswick plant, will reduce air pollution by roughly 7,000 tons/year. In other words, replacement of a similar coal-fired power plant with a gas-fired plant would produce three times as much energy, while emitting only one-fourth as much air emissions.

A coal-fired power plant with the same generating capacity as the Brunswick plant would emit roughly 10 million tons of greenhouse gasses, while Brunswick will emit only 5 million tons annually of greenhouse gasses.

ACP's increased supply of gas to Virginian and North Carolina will facilitate this phase-out of higher polluting coal power plants, with net benefits in reductions of greenhouse gasses and conventional air pollution.

In summary, the DEIS comprehensively outlines elaborate and well-proven pipeline construction mitigation measures to ensure protection of the environment even within this challenging terrain.

The ACP and Header Project will also provide economical supplies of gas to the Southeast, and these supplies will support fuel switching from coal to gas for energy generation in the Southeast. This will produce vast improvements in air quality and reductions in greenhouse gas emissions.

For these reasons, the International Union of Operating Engineers urges FERC to approve the Atlantic Coast Pipeline and Supply Header Projects.

Thank you for your consideration.

Sincerely,

James T. Callahan
General President

COMPANIES/ORGANIZATIONS COMMENTS

CO76 – North Carolina Petroleum Council

energy API | North Carolina Petroleum Council
A Division of the American Petroleum Institute

David McGowan, III
Executive Director

April 4th, 2017

Ms. Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE
Washington, D.C. 20426

Subject: Atlantic Coast Pipeline Project (Docket No. No. CP15-554)

Dear Ms. Bose:

CO76-1 On behalf of the North Carolina Petroleum Council, I am writing to request the Federal Energy Regulatory Commission's (FERC) approval of the proposed Atlantic Coast Pipeline (ACP).

This project is extremely important to the State of North Carolina for many reasons and it will have a profoundly positive impact on the state and its citizens. The ACP is a necessary project because of the tremendous need the state currently has for abundant, lower cost, and cleaner burning natural gas. Natural gas use has expanded rapidly in North Carolina in the recent past following the retirement of coal fired power plants. Increased demand for natural gas has also come from large manufacturers and other industrial users in the state. In addition, consumers are also increasingly reliant on natural gas for home heating, cooking and other domestic uses.

Furthermore, this project is also critical from an energy security and economic security perspective. North Carolina currently receives all of the natural gas consumed in the state from one pipeline. Construction of the ACP would provide the state with a secondary source of natural gas to help mitigate any potential future disruptions in supply. As we saw during the fall of 2016 during the interruption in gasoline supplies, our state desperately needs supply diversity for both natural gas and refined products. Approval of the ACP will help ensure the state's demand for natural gas can be met in the future.

Despite suggestions to the contrary from project opponents, great care has been taken to ensure all interested parties can make their voice heard and that public health and the environment are protected. In addition to extensive consultations with, local & state governments as well as the general public, both FERC and the companies involved have demonstrated their sincerity in receiving thoughtful input and incorporating that into the project plans. The Draft Environmental Impact Statement (DEIS) is the culmination of that collaborative effort and clearly shows the

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CO76-1 Comment noted.

CO76-1 (cont'd)

construction of this pipeline and protecting public health and the environment are not mutually exclusive. This pipeline is being planned and will be constructed and operated with adherence to the highest possible safety and environmental protection standards.

In summary, the ACP will help provide reliable, affordable and cleaner burning natural gas to our state and do so in an environmentally sensitive manner. In addition, it will also facilitate greater energy security and economic security by providing redundancy for North Carolina's natural gas supplies.

Accordingly, the North Carolina Petroleum Council supports FERC approval of the Atlantic Coast Pipeline and respectfully requests the commission act quickly to approve the ACP proposal as soon as it has a quorum of commissioners.

Respectfully,

David McGowan, III
Executive Director
North Carolina Petroleum Council

COMPANIES/ORGANIZATIONS COMMENTS

CO77 – Dominion Pipeline Monitoring Coalition

Dominion Pipeline Monitoring Coalition: Rick Webb, 3/30/17

CLOVER CREEK: High-Hazard Pipeline Construction

Figure 1 - Clover Lick Mountain, Pocahontas County, West Virginia

Examination of the available plans for construction of the Atlantic Coast Pipeline (ACP)[1] in the Clover Creek area reveals significant deficiencies in the Draft Environmental Impact Statement (DEIS) published on 12/30/16 for the proposed project by the Federal Energy Regulatory Commission (FERC). The DEIS does not satisfy the requirements of the National Environmental Policy Act (NEPA). As indicated in the following points, the DEIS fails to address a number of substantive environmental issues, and it allows deferral of critical analysis and plan submission.

CO77-1

- The proposed Atlantic Coast Pipeline would cross Clover Lick Mountain (4,000 feet), descend into the upper headwater area of Clover Creek, and ascend Gibson Knob (4,400 feet) on the ridge in the foreground of Figure 1. Extensive access road construction on steep slopes will also be required in this area.
- The Clover Creek, Clover Lick Mountain, and Gibson Knob area presents extreme challenges for pipeline construction due to steep slopes, high-excavation requirements, highly erodible and slip-prone soil, and the presence of interconnected karst ground water. The same risk factors are present at many other locations along the proposed ACP route.
- Although the Draft Environmental Impact Statement (DEIS) did not provide site-specific erosion and sediment control (ESC) plans or detailed information on slope stabilization, Atlantic has

1

CO77-1 Comment noted.

CO77-1 (cont'd)

subsequently provided limited information for 0.4 miles of the proposed construction corridor at two example locations, including a 0.3-mile section of the pipeline corridor on Clover Lick Mountain. Alignment sheets, depicting ESC measures were submitted to FERC and first made available to the public on 3/24/17.[2] This information was produced well after the publication of the DEIS, thus providing insufficient time for review and informed comment during the designated comment period for the DEIS. It is not clear when or if Atlantic will provide complete ESC and slope-stabilization plans for the entire construction corridor or for access road construction.

CO77-2

- Atlantic has not provided stormwater management plans for pipeline corridor and access road construction in the Clover Creek area and other areas of the proposed ACP route. Atlantic has instead contended that stormwater management plans are not required because areas disturbed by pipeline-related construction will be restored to pre-development runoff condition.[3] The Forest Service responded to this claim by describing construction-related changes that will alter the runoff properties of the pipeline corridor and by asking for documentation that justifies Atlantic's intention to not prepare stormwater management plans.[4] Stormwater management, during and post-construction, is critical for prevention of long-term erosion, slope destabilization, stream channel alteration, and degradation of stream habitat. Atlantic has ignored requests for proof that stormwater management plans are not necessary, and the issue was not addressed in the DEIS.

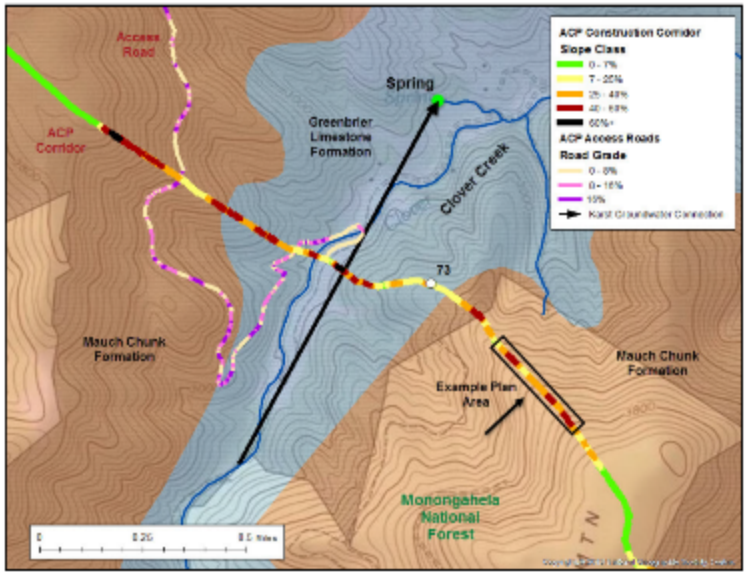

Figure 2 – Proposed pipeline construction in the Clover Creek area (steepness)

CO77-2 Stormwater is regulated by the states, and Atlantic and DETI would be required to comply with respective state stormwater standards.

CO77-3

- Figure 2 shows the location of the primary 125-foot-wide pipeline construction corridor (not including additional workspace and stockpile areas), the location of new access road, the location of the 0.3-mile example plan area, and critical environmental factors.

- Construction corridor steepness is indicated in Figure 2 as percent slope, with slope classes based on requirements for spacing of cross-corridor water diversions or slope breakers, which are crucial ESC structures designed to intercept runoff and direct it off of disturbed areas before it has a chance to concentrate, run down the corridor, and cause erosion and off-site sediment transport. Virginia ESC requirements specify placement of slope breakers at 25-foot intervals for slopes of 40% or greater.[5] West Virginia ESC requirements specify placement of slope breakers at 75-foot intervals for slopes greater than 25%, but acknowledge that installation is difficult on slopes greater than 35%.[6] A substantial part of the ACP construction corridor, including in the Clover Creek area, has slopes exceeding 40% where installation of slope breakers is not practicable. Atlantic's methods for controlling runoff on such steep slopes has not been disclosed to the public. Preliminary examination of limited ESC diagrams provided on 3/24/17 for example plan areas raises further concerns about installation of slope breakers on steep slopes, given complications associated with excess spoil and proposed waivers of open-trench limits.

- Access road steepness or gradient is indicated in Figure 2 as percent steepness. The classification is based on guidance developed by the Forest Service to minimize environmental effects of oil and gas roads. This guidance calls for closely following contours to the extent possible, and it states that: "*In mountainous or dissected terrain, grades greater than 8 percent up to 16 percent may be permissible with prior approval of the surface management agency.*"[7] Most of the proposed access road in the Clover Creek watershed exceeds 8%, and much of it exceeds 16%. In accordance with the cited guidance, construction of this access road would be prohibited or only allowed after study and planning by an interdisciplinary expert team.

- Figure 3 identifies high-excavation areas of the proposed pipeline and access road construction corridors. The indicated classes are based on the depth of earth material that may need to be removed to cut the original land surface down to a level construction area width of 125 feet for the pipeline corridor and 40 feet for the access road corridor. Much of the proposed pipeline and access road construction in the Clover Creek area will involve steep slopes and high levels of excavation. Specific information concerning the disposition and stabilization of excess spoil has not been provided.

- Much of the high-excavation and steep-slope construction in the Clover Creek area will involve the Mauch Chunk formation. The shales and siltstones of the Mauch Chunk form expansive-clay soils that are highly erodible, producing a suspension of clay-sized particles that are slow to settle-out from runoff and receiving waters. The Mauch Chunk also has the highest potential for slippage of any geology found on the Monongahela National Forest (MNF).[8] Large-scale excavation involving Mauch Chunk soils on steep slopes above and adjacent streams thus presents a high risk of environmental damage and violation of water quality standards. Questions were submitted to FERC during the NEPA scoping period concerning the effectiveness of available Best Management Practices (BMPs) for mitigating pipeline construction impacts in extreme geophysical conditions.[9] FERC did not address these issues and questions in the DEIS.

3

CO77-3 Comment noted.

COMPANIES/ORGANIZATIONS COMMENTS

CO77 – Dominion Pipeline Monitoring Coalition (cont'd)

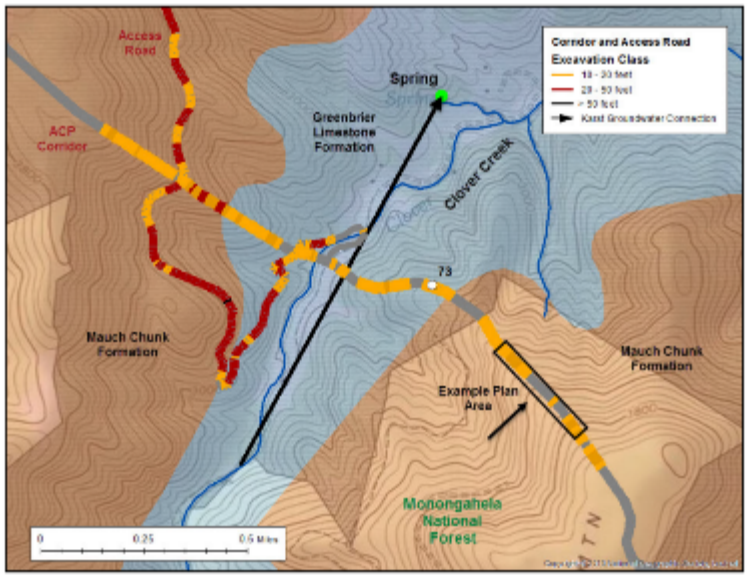

Figure 3 – Proposed pipeline construction in the Clover Creek area (excavation)

CO77-4 • Atlantic conducted a high-resolution Order 1 Soil Survey on the National Forests that should contribute to informed evaluation of erosion, sediment transport, and slippage potential associated with earth disturbance during construction of the pipeline corridor, access roads, and related infrastructure in the Mauch Chunk region and other areas with steep slopes and problem soils. However, there is no evidence that Atlantic has actually incorporated the Order 1 Soil Survey data in the analysis of risks or mitigation planning.[10] For much of the route, high-resolution soil surveys were not even conducted. Despite the presence of highly erodible and slip-prone soils, Atlantic has not taken the basic steps of collecting and using high-quality soils data to inform route selection and mitigation planning.

CO77-5 • The presence of the Greenbrier Limestone in the path and downslope of the proposed pipeline and access road corridors presents a high risk of damage to interconnected hydrologic systems. Hydrologic connections have been studied to some extent throughout the larger Mauch Chunk and Greenbrier Limestone area that includes the Clover Creek watershed. The karst groundwater connection indicated on the maps in Figures 1 and 2 is one of many karst groundwater connections that have been identified in or near the pipeline path through the use of dye tracing.[11] Although

CO77-4 See response to comment CO63-1.

CO77-5 Comment noted.

CO77-5 (cont'd)

dye-tracing methods are available for identifying karst recharge zones and interconnections, Atlantic has chosen not to use this well-established technology for identifying high-risk locations when planning the pipeline route. Comments were submitted to FERC during the NEPA scoping period that identified the need to delineate karst recharge zones and hydrologic connections.[12] Atlantic and FERC, however, failed to address the issue of risk to karst groundwater systems in the DEIS. Instead, Atlantic has simply identified surface karst features in a 300 to 500-foot corridor centered on the pipeline path.[13] Given that there is minimal discussion of the karst recharge issue in the DEIS or supplemental submissions, it seems that Atlantic's nearly exclusive focus concerns pipeline construction problems rather than risk of harm to water supplies or dependent ecosystems. Given the long-distance hydrologic connections (multiple miles) that have been identified in the Appalachian karst region, a 500-foot study area is insufficiently informative. More importantly, it does not appear that ACP pipeline or access road routing decisions have accounted for the location of wells and springs or karst features and groundwater connections.

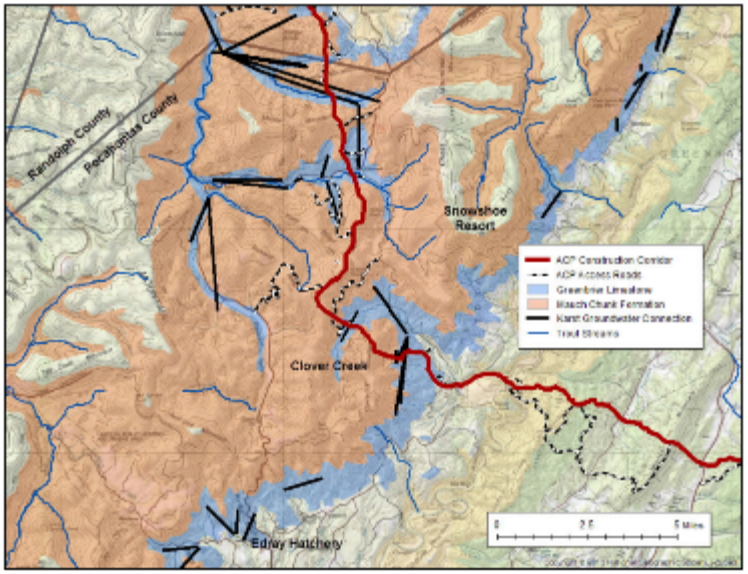

Figure 4 – ACP routing across the Mauch Chunk and Greenbrier Limestone formations

- As indicated in Figure 4, the proposed ACP crosses a large region of Mauch Chunk and Greenbrier Limestone. A number of dye traces have been conducted in this region, including many that have

CO77-5 (cont'd)

shown karst groundwater connections in areas that will be crossed by the pipeline.[14] Previous experience indicates a risk of karst system contamination and reduced spring flows following large-scale earth disturbance in or adjacent to karst terrain. During construction of the Highland Scenic Highway in the late 1970s the major spring that supplies water to the Edray Trout Hatchery, was contaminated by suspended sediment, resulting in a large fish kill and reduced spring yield.[15] In this case, sediment-laden drainage from highway construction on the Mauch Chunk travelled two miles before emerging in springs associated with the Greenbrier Limestone, first by surface water in two sinking streams and then via subsurface flow passing under a topographic divide. Construction of the proposed ACP and related access roads will affect multiple locations with similar geology and hydrology in western Pocahontas County and in other karst areas in the path of the proposed pipeline. The DEIS does not address the associated risk of significant damage to water supplies and dependent aquatic ecosystems.

CO77-6

- The extreme topographic, geophysical, and hydrologic conditions present in the Clover Creek area occur in much of the approximately 200 miles of proposed pipeline path in the mountainous region of West Virginia and western Virginia. Within this area:
  - The pipeline corridor would cross about 73 miles of karst terrain.
  - The original pre-excavation ground slope would equal or exceed 30% for about 44 miles of pipeline construction corridor and about 69 miles of access road corridor.
  - High-excavation areas, where up to 30 feet of the original ground surface would be removed, total about 16 miles of pipeline construction corridor and about 36 miles of access road corridor.
  - Long steep slopes, where the slope equals or exceeds 30% for at least 100 feet, total about 21 miles for the pipeline construction corridor.
  - Access road gradients equal or exceed 8% for about 55 miles and equal or exceed 16% for about 25 miles.

The public has not had access to detailed and site-specific construction plans and proposed mitigation measures that address these and other environmental risk factors. Proper implementation of NEPA requires an opportunity for public review and comment. The DEIS for the ACP, however, repeatedly fails to address or provide the critical information required for meaningful review.

6

CO77-6 Comment noted.

NOTES AND CITATIONS

[1] Atlantic Coast Pipeline, LLC, formed by four companies, Dominion, Duke Energy, Piedmont Natural Gas, and Southern Company Gas, is herein referenced as "Atlantic."

[2] Site-Specific Designs of Representative Steep Slope Crossings on U.S. Forest Service Lands, Atlantic Coast Pipeline, LLC Supplemental Filing, 3/24/17 (FERC Dockett CP15-554-000, Accession No. 20170324-5283).

[3] Construction, Operations, and Maintenance Plans, Draft, Prepared by ERM, August 2016. First submitted by Atlantic to the U.S. Forest Service and FERC, 8/22/16 (FERC Dockett CP15-554-000, Accession No. 20160824-5160).

[4] Forest Service Comments on the Construction, Operation, Maintenance Plan for the Proposed Atlantic Coast Pipeline Project. Forest Service submission to FERC, 11/10/16 (FERC Docket CP15-554-000, Accession No. 20161110-5195).

[5] Virginia Erosion and Sediment Control Handbook, Standards and Specification 3.11, 1992.

[6] West Virginia West Virginia Erosion and Sediment Control Best Management Practice Manual, Standards and Specifications 3.18, 2006.

[7] Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development, Bureau of Land Management and U.S. Forest Service, 2007.

[8] Forest Service Analysis of Landslide Data from a Recent Flood Event in the Monongahela National Forest. Submitted to FERC by the U.S. Forest Service, 12/23/16 (FERC Docket CP15-554-000, Accession No. 20161227-5025).

[9] Dominion Pipeline Monitoring Coalition, 6/2/16. Submitted in response to the Supplemental Notice of Intent to Prepare an Environmental Impact Statement and Proposed Land and Resource Plan Amendment(s) for the Proposed Atlantic Coast Pipeline, Request for Comments on Environmental Issues Related to New Route and Facility Modifications, and Notice of Public Meetings. Published by FERC, 5/1/16 (FERC Docket CP15-554-000, Accession No. 20160602-5208).

[10] Letter from James A. Thompson, Ph.D. Professor of Pedology and Land Use, West Virginia University, to Clyde N. Thompson, Forest Supervisor, Monongahela National Forest, 2/22/17 FERC Docket CP15-554-000, Accession No. 20170224-5030).

[11] West Virginia Water Resources Management Plan Mapping Tool, West Virginia Department of Environmental Protection, http://tagis.dep.wv.gov/WVWaterPlan/ (accessed 3/29/17).

[12] Dominion Pipeline Monitoring Coalition, 6/2/16. Submitted in response to the Supplemental Notice of Intent to Prepare an Environmental Impact Statement and Proposed Land and Resource Plan Amendment(s) for the Proposed Atlantic Coast Pipeline, Request for Comments on Environmental Issues Related to New Route and Facility Modifications, and Notice of Public Meetings. Published by FERC, 5/1/16 (FERC Docket CP15-554-000, Accession No. 20160602-5208)

[13] Supplemental Information submitted by Atlantic to FERC, 3/24/17 (FERC Docket CP15-554-000, Accession No. 20170324-5283).

[14] West Virginia Water Resources Management Plan Mapping Tool, West Virginia Department of Environmental Protection, http://tagis.dep.wv.gov/WVWaterPlan/ (accessed 3/29/17).

[15] Environmental Impact Statement, Extension of the Highland Scenic Highway West Virginia Route 150 from U.S. Route 219 to U.S. Route 250, Monongahela National Forest, 1982.

ASSESSMENT OF THE ADVERSE HYDROGEOLOGICAL IMPACTS RESULTING FROM CONSTRUCTION OF THE PROPOSED ATLANTIC COAST PIPELINE IN WEST VIRGINIA, VIRGINIA, AND NORTH CAROLINA

Prepared for the Dominion Pipeline Monitoring Coalition
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March 2017

EXECUTIVE SUMMARY

Since January, 2015, Atlantic Coast Pipeline, LLC (ACP) and Dominion Transmission, Inc. (DTI) have submitted documents to the Federal Energy Regulatory Commission (FERC) pertaining to the project description, location, and impacts for construction of a gas pipeline extending 603.8 miles through West Virginia, Virginia, and North Carolina. References to these previously submitted documents are included in the Draft Environmental Impact Statement (DEIS), Docket Numbers CP15-554-000, CP15-554-001, CP 15-555-000, and CP15-556-000), incorporated and submitted by the FERC staff and made available to the public on December 31, 2016.

CO77-7 In the "Notice of Availability of the Draft Environmental Impact Statement for the Proposed Atlantic Coast Pipeline, Supply Header Project, and Capacity Lease Proposal", dated December 30, 2016, the FERC staff stated the following: "The FERC staff concludes that approval of the projects would have some adverse and significant environmental impacts; however, the majority of impacts would be reduced to less-than-significant levels with the implementation of the Atlantic's and DTI's proposed mitigation and the additional measures recommended in the draft EIS." This statement does not recognize consideration of cumulative impacts, as required of all federal agencies by the National Environmental Protection Act (NEPA).

The FERC staff opinion does not define the use of the word "significant" as meaning statistically significant or significant with respect to any particular parameter. Nor does the DEIS provide clarification of this terminology. There is ample opportunity to provide metrics in an opinion concerning impacts:

1) Calculations of discharge within first and second order stream watersheds, using the Rational Method or the TR-55 (developed by the Soil Conservation Service/Natural Resources Conservation Service) provide the amounts of increased stormwater discharge to streams resulting from deforestation and soil compaction in the pipeline construction areas;

2) Calculations of downstream stream bank erosion and stream bed scour provide quantities of sediment introduced to the streams as a result of increased stormwater discharge from the pipeline construction areas;

CO77-7 Comment noted. Section 4.13 discusses cumulative impacts.

3) Review of the Total Maximum Daily Loads (TMDLs) for the impacted streams provides a maximum measure of Total Suspended Solids (TSS) and turbidity in streams resulting from increased sedimentation;

4) Calculations of the Revised Universal Soil Loss Equation (RUSLE) provide a measure of expected increases in sedimentation in streams resulting from pipeline construction activities;

5) Measurements of embeddedness in the stream beds provide statistical evaluation of the aquatic environments, including high quality aquatic environments that would be adversely impacted by sediment from pipeline construction activities;

6) Bioassays of streams would provide statistical evaluation of stream quality; and

7) Percent effectiveness of the suggested best management practices used at the pipeline construction areas would provide an evaluation of the expected increased stormwater discharge and sedimentation.

Qualitative opinions are appropriate with respect to scientific research and recommendations provided by government agencies. For example:

1) The West Virginia Geological and Economic Survey (WVGES) has determined that landslide-prone areas occur mostly on slopes of 15% to 45% on red shale bedrock.

2) The U.S. Geological Survey (USGS) emphasizes that "Groundwater is not a renewable resource" and that groundwater and surface water are connected as one integral system.

3) The Environmental Protection Agency (EPA) and the U.S. Department of Agriculture (USDA) have embraced the River Continuum Concept as illustrating the strong connection between headwater areas on mountain ridges and various downstream areas. Larval insects, predominant in the forested headwaters, break down organic matter used downstream by aquatic species higher on the food chain.

4) The EPA has established TMDLs for sediment loads in streams.

5) The EPA has developed the Save Our Streams program to provide statistical analysis and evaluation of stream quality.

CO77-8 The DEIS does not include a comprehensive list of specific soils series crossed by the proposed ACP route. This information is necessary for RUSLE calculations.

CO77-8 A comprehensive list of specific soil series crossed by the project was filed by Atlantic and DETI in Resource Report 7. Section 4.2.3 describes the rationale for selecting the settings that were applied in conducting FERC's independent RUSLE2 analysis to address a specific commentor's concerns in Bath County, Virginia. RUSLE2 analyses are not required for the entire project area; however, the analysis was completed to respond to that commentor's specific comments and does not include a comprehensive analysis of the entire proposed route. The results of this analysis were included in appendix P.

CO77-8 (cont'd) The RUSLE calculations provided in the DEIS are inadequate and deficient because the discharge area is not delineated and the soils are grouped as a complex.

CO77-9 The DEIS is deficient because Tier 1, Tier 2, and Tier 3 streams are not identified, even though this information is available on the West Virginia, Virginia, and North Carolina state environmental websites.

The DEIS is deficient because there is no consideration of impacts to groundwater due to reduced recharge from increased stormwater runoff from the ACP construction areas.

The DEIS is deficient because the selected Best Management Practices will not prevent sediment from accumulating in streams.

The DEIS is deficient because there are no calculations provided to estimate increased stormwater discharge in watersheds of first order streams, second order streams, and/or third order streams, which are the most critical streams in the river continuum.

The DEIS is deficient because there is no consideration of groundwater depletion with respect to seeps and springs in headwater areas, stream baseflow, or residential wells.

The DEIS is deficient because there is no consideration of decreased groundwater hydraulic head, due to dewatering and reduced groundwater recharge along the ACP construction route, causing decreased baseflow to streams. The hydraulic head must also be maintained and to prevent saltwater intrusion in aquifers of the Coastal Plain Physiographic Province.

The DEIS is deficient because the sediment from the construction site, along with sediment from downstream stream bank erosion and increased vertical scour, will increase stream bed embeddedness, causing degradation of aquatic habitats.

The DEIS is deficient because the sediment introduced to the receiving streams due to the proposed ACP construction activities will cause elevated concentrations of water quality parameters, exceeding the Total Daily Maximum Levels established for these parameters.

The DEIS is deficient because there is no consideration of the increased stream bed embeddedness downstream of proposed ACP stream and river crossings and there have been no bioassays conducted at these locations to establish the existing conditions.

It can only be concluded that there will be significant, permanent damage to streams receiving stormwater discharge from the proposed ACP construction areas and to streams crossed by the proposed ACP route.

CO77-9 Comment noted.

1.0 MEASUREABLY SIGNIFICANT CONSTRUCTION IMPACTS TO WATERSHEDS

"Watershed" refers to all of the land that drains to a certain point on a river (**Figure 1.0-1**). A watershed can refer to the overall system of streams that drain into a river, or can pertain to a smaller tributary. Stream order is a measure of the relative size of streams. The smallest tributary is a first order stream, which originates in the highest elevations.

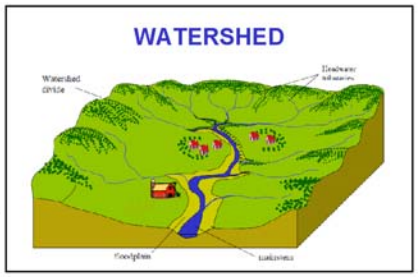


Figure 1.0-1 – Headwaters of first order high gradient streams are located at the highest elevations on the watershed divides.

Strahler (1952) defined a hierarchy of stream tributaries to depict the relationships of stream order. Where two first order streams connect, a second order stream is designated. Where two second order streams connect, a third order stream is designated (**Figure 1.0-2**).

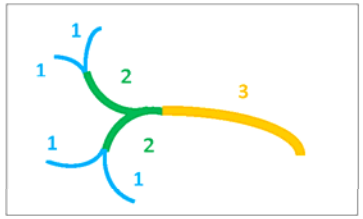


Figure 1.0-2 – Schematic diagram of the relationship of first order streams (designated "1", shown in blue), second order streams (designated "2", shown in green), and third order streams (designated "3", shown in orange). First order streams form in headwater areas at the highest elevations in watersheds. (Diagram based on Strahler, 1952).

1.1 Watershed Sizes

The Federal Government Agencies have established a hierarchical ordering of Hydrological Unit Codes (HUC), described as areas of land upstream from a specific point on the stream (generally the mouth or outlet) that contributes surface water runoff directly to this outlet point (Table 1.1-1).

Table 1.1-1 – Descriptions of Hydrological Unit Codes (HUC).

Code	Official Name	General Description
HUC-2	REGION	Major land areas. The lower 48 states have 18 total, 1 additional each for Alaska, Hawaii, and the Caribbean. (21 total in US), called 1st Level – or Watershed 1st Level.
HUC-4	SUBREGION	Each Region has from 3 to 30 Subregions. The Missouri River Region has 30 Subregions. The lower 48 states have 204 (222 total in US), called 2nd Level.
HUC-6	BASIN	Accounting Unit (352 total in US), called 3rd Level.
HUC-8	SUBBASIN	Cataloging Unit. The smallest is 448,000 acres (700 square miles). Most are much larger. National HQ compilations have this as the smallest size unit (2,149 total in US), called 4th Level.
HUC-10	WATERSHED	Typically from 40,000 to 25,000 acres (62 to 390 square miles). Work continues per new Interagency guidelines presented to Federal Geographic Data Committee on December 2000 (was formerly called HUC-11), called 5th Level or Watershed 5th Level.
HUC-12	SUBWATERSHED	Typically from 10,000 to 40,000 acres (15 to 62 square miles). Work continues per new Interagency guidelines presented to Federal Geographic Data Committee on December 2000 (was formerly called HUC-14), called 6th Level or Watershed 6th Level.

HUC designations were developed by Seaber, Paul R., F. Paul Kapinos, and George L. Knapp ("Hydrologic Unit Maps", U.S. Geological Survey Water-Supply Paper 2294; 1987) as a "standardized base for use by water-resources organizations in locating, storing, retrieving, and exchanging hydrologic data, in indexing and inventorying hydrologic data and information, in cataloging water-data acquisition activities…" HUC-8 Subbasin designations were based on a drainage area of greater than 700 square miles (448,000 acres). The smallest HUC is the HUC-12 Subwatershed, which typically encompasses an area from 10,000 acres to 40,000 acres. The HUC designations were not intended to determine specific details for smaller watersheds of tributaries which provide water quality and biotic functions of aquatic organisms for the overall watershed evaluations.

1.2 Watershed Delineation Sizes Providing Significantly Meaningful Metrics

In 2007, the U.S. Fish and Wildlife Service (USFWS) prepared a document, "Functional Assessment Approach for High Gradient Streams", for the U.S. Army Corps of Engineers to use in assessing impacts and mitigation with respect to processing Clean Water Act 404 permit applications. High gradient headwater streams are characterized as first and second order ephemeral and intermittent streams with channel slopes ranging from 4% to greater than 10%, within watersheds of approximately 200 acres. The significance of this report relates to the proposed MVP gas pipeline construction with regard to how watersheds are evaluated. Because of the impacts of construction on the functions of headwater areas in the watersheds of first order high gradient streams, it is critical to evaluate these areas not simply as a small acreage within the area encompassing the construction project, but rather as functionally contributing areas which are the basis of water quality and aquatic habitat quality within the overall watershed.

In order to evaluate the interactions of precipitation, stormwater discharge, groundwater recharge and retention, and stream baseflow, calculations must be performed at the headwater tributary level. Because first order high gradient streams are well defined (Rosgen, 1994) and are considered to provide the basis for watershed evaluation (USFWS, 2007), it is essential to select these smaller watersheds, typically 200 acres in size, to evaluate the impact of construction projects.

CO77-10 It is critical to delineate the areas of different ground covers within a watershed in order to accurately calculate stormwater discharge. In the Watershed Protection Research Monograph No. 1, prepared by the Center for Watershed Protection (2003), it is emphasized that the relationship between impervious cover and stream quality applies to watersheds of first order streams, second order streams, and third order streams. It is therefore extremely important to evaluate watersheds of the first order streams, second order streams, and third order streams impacted by proposed ACP construction in order to adequately determine the impacts of increased stormwater discharge due to an increase in impervious surfaces.

In the "Rapid Watershed Planning Handbook", prepared by the Center for Watershed Protection in 1998, it is emphasized that streams are impaired when impervious surfaces are just 10 percent of a watershed and that streams cannot support aquatic life when impervious surfaces cover 25 percent of the watershed area. At 12 percent imperviousness, trout and other sensitive species cannot survive. At 8 percent to 10 percent impervious cover, the streams double in the size of the bed due to increased volume, leading to increased stream bank erosion and loss of riparian buffers. The impervious surface amounts increase the stormwater discharge, which is responsible for the consequent erosion. It follows that where stormwater discharge is increased, due to an increase in less permeable surfaces, even without strictly impermeable surfaces, it is the increase of stormwater discharge to specific quantities that causes the damage to streams. Watersheds must be evaluated for stormwater discharge from all

CO77-10 Comment noted.

CO77-10 (cont'd)

the ground covers within the watershed in order to determine if the stormwater discharge is equal to or greater than the stormwater discharge that would result from a 10 percent impervious area within the watershed.

1.3 Construction Impacts to Watershed Functions

Forested ridges intercept rainfall so that it gently penetrates the ground as groundwater rather than flowing overland as runoff. This means that 1) the rain will gently fall to the ground and recharge groundwater and 2) the surface flow of rainwater on the ground will be slower than in cleared areas, thereby reducing the velocity and quantity of stormwater drainage. Conversely, deforestation removes the protective tree canopy, causing increased stormwater discharge and decreased groundwater recharge. It is stated in the DEIS that "Clearing and grading would remove trees, shrubs, brush, roots, and large rocks from the construction work area and would level the right-of-way surface to allow operation of construction equipment." The proposed ACP construction would thus result in deforestation and soil compaction, causing increased stormwater discharge and decreased groundwater recharge. **Figure 1.3**-1 provides an illustration of a typical pipeline installation work corridor. Leveling of the work corridor and access roads, along with trenching for pipe installation and for installation of cathodic protection systems (within a deforested 25-foot wide corridor), will intercept groundwater, thereby reducing or eliminating the flow of water to rock fractures which serve as a conduit to provide water to seeps, springs, and wetlands, as well as to streams during times of drought. It is further stated that additional acreage is required for proposed additional temporary workspaces, pipe yards, staging areas, access roads, and construction associated with aboveground facilities. "The Virginia Department of Environmental Quality's Ground Water Characterization Program recognizes that springs are one of the most basic, important, and often times forgotten components of any hydrologic study" (http://www.deq.virginia.gov/Programs/Water/WaterSupplyWaterQuantity/GroundwaterCharacterization/SpringDatabase.aspx.)

Figure 1.3-1 – Leveled work corridor for pipeline installation, showing cut hillsides and dewatering. Heavy equipment and truck traffic, along with soil stockpiles, will compact soils.

CO77-10 (cont'd)

The WVDEP Erosion and Sediment Control Best Management Practices Manual (WVDEP, 2006, revised August 29, 2016) states that for access roads and work areas: "A 6-inch course of crushed aggregate shall be applied immediately after grading. Geotextile fabric should be applied to the roadbed for additional stability. In heavy duty traffic situations, stone should be placed at an 8 to10 inch depth to avoid excessive maintenance." Compacted access roads and work areas with gravel surfaces are essentially impermeable.

1.4 Construction Impacts to Water Sources in Headwater Areas of Watersheds

CO77-11

As depicted in **Figure 1.4-1**, when rainwater is intercepted by trees on forested ridges, the rainfall gently penetrates the ground surface and migrates downward through the soil to bedrock. The water then flows through bedrock fractures and along bedding planes to continue migrating downward or to form seeps and springs where the fractures or bedding planes intercept the ground surface. Seeps and springs can occur at various elevations on mountain slopes, depending on where the bedrock fractures or bedding planes intercept the ground surface, providing water to headwater areas and wetlands in headwater areas of first order high gradient streams. Seeps and springs can also occur along streams and rivers. As the quantity of groundwater accumulates beneath the ground surface, a hydraulic gradient forms, causing the groundwater to move downgradient to nearby streams and rivers or to lower areas where the water may reach streams and rivers that are farther away. The seeps and springs provide groundwater to the streams during times of dry weather or drought.

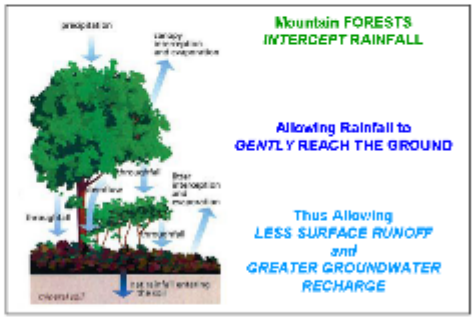


Figure 1.4-1 – Forests on ridges facilitate groundwater recharge and reduced stormwater runoff.

1.5 Construction Impacts to Soils and to the River Continuum

CO77-12

Headwater areas of first order streams provide the essential aquatic habitats for aquatic species and associated terrestrial fauna and fowl within the entire length of the river continuum in the overall watershed. The soils which have formed in the headwater

CO77-11 Comment noted.

CO77-12 Comment noted.

CO77-12 (cont'd)

areas regulate the transport of surface water and also carbon, nitrogen, and oxygen. The shade of the forest canopy provides the filtered light and lower temperatures critical to maintaining the headwater aquatic habitats.

Specific soils series develop based on the following factors: parent material, topography, climate, living organisms, and time. Soils scientists estimate that a time period greater than 100 years is required for one inch of soil to form (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/wa/soils/?cid=nrcs144p2_036333). Soil is therefore considered to be a non-renewable resource.

The River Continuum Concept was developed by Vannote, R.L., G. W. Minshall, K.W. Cummins, J.R. Sedell, and C.E. Cushing in 1980 and presented in the Canadian Journal of Fisheries and Aquatic Sciences 37: 130-137. The U.S. Environmental Protection Agency and the U.S. Department of Agriculture have embraced the River Continuum Concept as illustrating the strong connection between headwater areas on mountain ridges and various downstream areas. The River Continuum Concept diagram (**Figure 1.5-1**) provides pie diagrams of predominant benthic aquatic organisms associated with various locations, starting at the headwaters, along the river continuum. Shredders, predominant in the forested headwaters, break down organic matter used downstream by collectors, predators, and filter-feeders. The filter-feeders are subsequently consumed by larger benthos and fish.

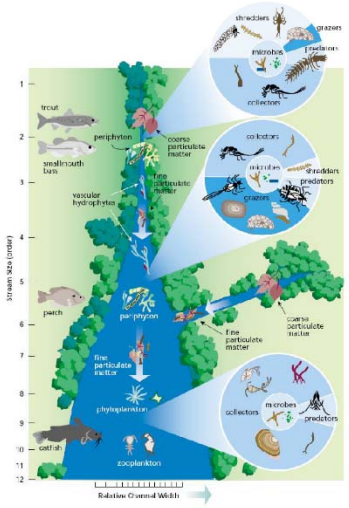


Figure 1.5-1 – The River Continuum (Vannote, et al; 1980) illustrates the food chain connection between headwater areas of first order high gradient streams and the wider, larger downstream areas in the overall watershed.

CO77-12 (cont'd)

Trees not only intercept rainfall so that it falls gently to the ground surface and is thus able to penetrate the ground as groundwater recharge, but also store nutrients in their trunks, branches, and roots (West Virginia Department of Natural Resources: http://www.wvdnr.gov/Wildlife/Plants.shtm). Fungi in the soil facilitate transport of nutrients between trees and the soil. The soil stores nutrients which are processed by soil microbes to regulate essential nutrient cycles involving oxygen, carbon dioxide, nitrogen. Roots of the trees and of herbal vegetation help to stabilize the soil so that the soil nutrients are not washed away by stormwater runoff. The ecological communities in the headwater areas of first order high gradient streams consist not only of the vegetation, but also the aquatic benthic macroinvertebrates, fungi, and soil microbes. Insect larvae, commonly grouped as shredders, constitute most of the aquatic benthic macroinvertebrates in the headwater areas because they shred organic material into components used by collectors and predators downstream.

2.0 GROUNDWATER

Groundwater recharge occurs from precipitation flowing downward through the soil to weathered rock materials and to fractures, faults, bedding-plane separations, and joints in the underlying bedrock. Seeps and springs form on mountain slopes where the ground surface intercepts the bedrock fractures, faults, bedding-plane separations and joints in the Appalachian Plateau Physiographic Province and the Valley and Ridge Physiographic Province. The Valley and Ridge Physiographic Province herein incorporates the Blue Ridge Physiographic Province. In the Piedmont Physiographic Province, groundwater recharge from precipitation flows downward through the soil to weathered rock materials and then into bedrock fractures, faults, bedding-plane separations, and joints. However, in the Piedmont Physiographic Province, the flow of groundwater is primarily through the weathered rock materials which occur as a thick transition zone between soil and the underlying bedrock. Groundwater in the thick wedge of unconsolidated sediments underlying Coastal Plain Physiographic Province is recharged partially from precipitation, but mostly from groundwater flowing from the transition zone of the Piedmont Physiographic Province into confined aquifers within the Coastal Plain Physiographic Province.

2.1 Groundwater in the Appalachian Plateau Physiographic Province and the Valley and Ridge Physiographic Province

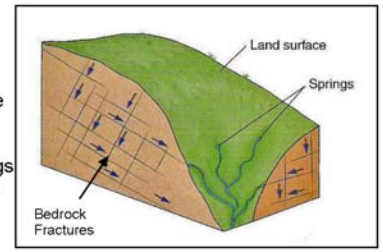
In the Appalachian Plateau Physiographic Province, groundwater is recharged where precipitation flows downward through faults, joints, bedding-plane separations, and fractures in the underlying sedimentary rocks (Sheets and Kozar,2000). Although the bedrock is mostly flat-lying in the Appalachian Plateau Physiographic Province, steep, mountainous topography has developed due to erosion and downcutting through the

bedrock, creating deep V-shaped valleys. This erosional relief ranges from 200 feet to 1300 feet.

Bedrock underlying the Valley and Ridge Physiographic Province consists of interbedded limestone and dolostone (carbonate rock), shale, and sandstone which has been folded into anticlines and synclines and which has been highly faulted (Hollyday and Hileman,1996). Groundwater is recharged from precipitation, which moves downward through the soil and into the bedrock through joints, fractures, bedding-plane partings, and dissolution openings (voids formed in the carbonate rocks).

Springs and seeps occur where the bedding planes, faults, and fracture sets intersect the ground surface along mountain ridges (**Figure 2.1-1**). Seeps and springs maintain the flow of water to headwater areas, where wetlands are located, and also to streams. During times of drought, groundwater maintains a flow of water to streams. Where there is deforestation and compaction of soil at the ground surface, there is a reduction of groundwater recharge and, consequently, a reduction of available water through fractures to maintain springs and seeps. Excavation and blasting intercepts groundwater and also changes the amount and direction of groundwater flow. Seeps and springs disappear where groundwater is no longer available. It is significant to note that blasting activities along the ridges can destroy the areas where the springs occur, changing the amount and direction of groundwater flow.

Figure 2.1-1 – Fractures within any rock provide conduits through which groundwater may flow downward or at angles to the ground surface. Where bedding planes of the rock or where fractures in the rock intercept the ground surface, it is common for springs or seeps to occur. Seeps and springs also provide water directly to streams.



Carbonate rock (limestone and dolostone) is present as bedrock underlying areas within both the Appalachian Physiographic Province and the Valley and Ridge Province. A distinctive karst terrain develops where surficial carbonate bedrock is present (**Figure 2.1-2**), consisting of numerous caves, crevices, cavities (voids), fractured rock, disappearing streams, sinkholes, and springs. In areas where surficial sandstone or shale overlies carbonate rock, karst features are not as noticeable. However, the karst features (caves, crevices, cavities, disappearing streams, sinkholes, and springs) are present in the underlying carbonate bedrock.

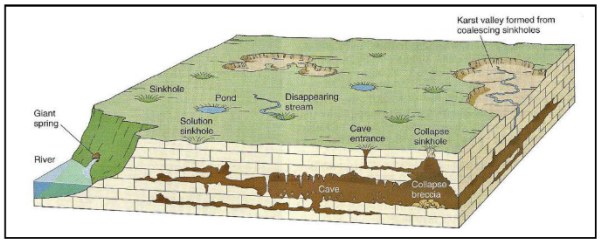


Figure 2.1-2 – Features typical of karst terrain.

Groundwater flow through carbonate bedrock in karst areas exhibits both diffuse flow and conduit flow. Conduit flow consists of "integrated systems of openings ranging from solutionally widened joints and bedding plane partings to pipelike passages many meters in diameter" (White, 1988). Pipelike passages and larger solutionally widened joints and bedding plane partings can be observed in the caves throughout the area, and are also present, although inaccessible for observation, in limestone and dolomite throughout the area. Dasher (2000) provides descriptions of groundwater in extensive karst sub-basins of caves within the Greenbrier Limestone, which underlies a portion of the proposed ACP construction route. Dye traces provide evidence of the groundwater flow directions within the limestone. Springs attest to the flow of groundwater through fractures and along bedding planes within the limestone, in addition to flow through interconnected voids in the limestone. Groundwater flow within carbonate rock extends far beyond the local area karst terrain. Where deforestation and compaction occurs in the proposed ACP work corridor and associated areas, groundwater recharge is reduced and has adverse impacts on groundwater within all bedrock, especially carbonate bedrock, underlying the Appalachian Plateau Physiographic Province and the Valley and Ridge Physiographic Province.

CO77-13

Surface water and groundwater are components in one integral unit. In its document, "Sustainability of Ground-Water Resources", the USGS emphasizes that "Groundwater is not a renewable resource". To understand this statement requires an understanding of the global water budget and also an understanding that groundwater and surface water are connected as one integral system. The global water budget, or hydrological cycle, consists of precipitation, evaporation, and condensation. It is important to recognize, however, that the hydrological cycle over the ocean (covering approximately three-quarters of the earth) is essentially separate from the hydrological cycle over the continents. Dennis Hartmann, in his book "Global Physical Climatology", provides an excellent summary diagram (**Figure 2.1-3**) showing the pathways of the hydrological

CO77-13 Comment noted.

cycle in terms of centimeters per year for the exchange of water. Through time, there has been a delicate balance of the amount of precipitation transferred to the continents from the hydrological cycle over the oceans and the amount of surface water flowing into the ocean. In this slide, the arrow representing the amount of water from the ocean's hydrological cycle indicates that 11 centimeters per year transfers from the ocean to the continent. The arrow showing the runoff from the land surface indicates that 11 centimeters flows back to the ocean from the continent. It is obvious that when groundwater recharge is reduced and streamflow into the oceans is increased, a situation is created where there is no longer a balance: when streamflow to the oceans exceeds the amount of precipitation from the oceans back onto the continents, the water in the continental hydrological cycle is *lost forever*.

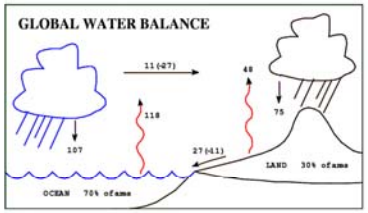


Figure 2.1-3 – Our water resources are finite on our continents. Calculations of the global water balance indicate that water transferred to land from the oceans is balanced by water drainage from land to the oceans. If water drainage to the oceans exceeds the amount of water transferred to land from the oceans, our water resources on land are lost. (Units are in centimeters per year. Diagram by Dennis L. Hartmann, Global Physical Climatology, 1994.)

2.2 Groundwater in the Piedmont Physiographic Province

In the Piedmont Physiographic Province, groundwater recharge from precipitation flows downward through the soil to weathered rock materials and then into bedrock fractures, faults, bedding-plane separations, and joints. However, in the Piedmont Physiographic Province, the flow of groundwater is primarily through the weathered rock materials which occur as a thick transition zone between soil and the underlying bedrock, as depicted in **Figure 2.2-1**. Groundwater flows from the transition zone into fractures and other openings in the bedrock.

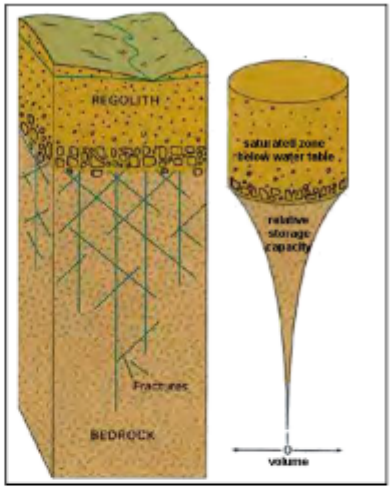


Figure 2.2-1 – Groundwater is stored mostly in the weathered rock, or transition zone, above bedrock. Groundwater flows through the transition zone and through fractures and other openings in the bedrock in the Piedmont Physiographic Province. (Figure excerpted from Groundwater in Virginia, http://www.virginiaplaces.org/watersheds/groundwater.html)

2.3 Groundwater in the Coastal Plain Physiographic Province

Groundwater in the thick wedge of unconsolidated sediments underlying Coastal Plain Physiographic Province is recharged partially from precipitation and partially from groundwater flowing from the transition zone of the Piedmont Physiographic Province into confined aquifers within the Coastal Plain Physiographic Province (McFarland and Bruce, 2006). **Figure 2.3-1** depicts the groundwater flow in the Coastal Plain Physiographic Province.

COMPANIES/ORGANIZATIONS COMMENTS

CO77 – Dominion Pipeline Monitoring Coalition (cont'd)

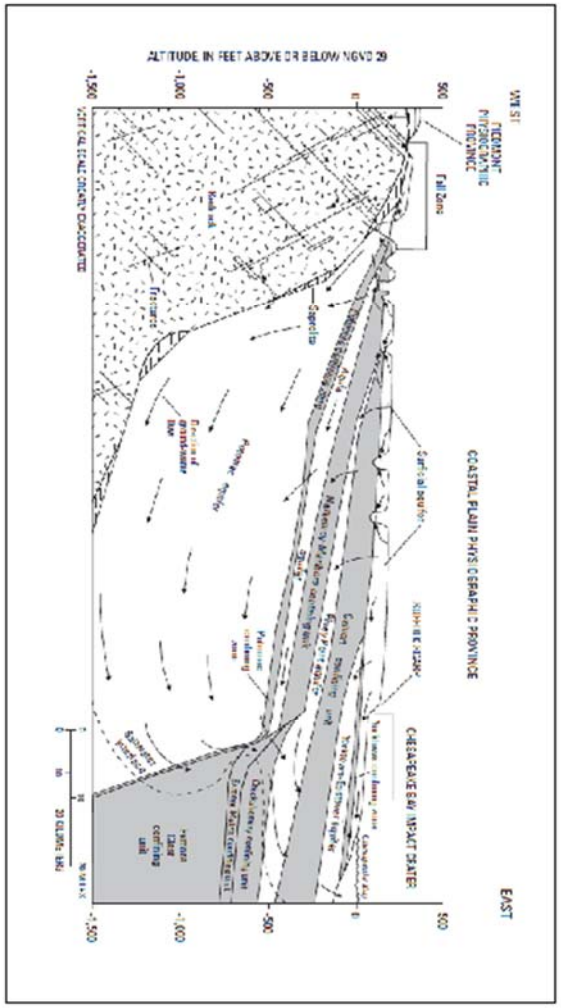


Figure 2.3-1 – Relationships and directions of groundwater flow in the Coastal Plain Physiographic Province and the Piedmont Physiographic Province (McFarland and Bruce, 2006).

An aquifer refers to a geological formation which is permeable enough to transport groundwater. The surficial aquifer in the Coastal Plain Physiographic Province is designated as an unconfined aquifer because there are no confining, relatively impermeable geological materials above the surficial aquifer. Groundwater recharge occurs when precipitation infiltrates the surficial soil and migrates downward to the water table.

Aquifers which occur below the surficial aquifer are limited to specific permeable portions of the underlying geological formations. Relatively impermeable material, such as clay, confines the uppermost and lowermost limits of the aquifer. Such aquifers are considered to be confined aquifers. There are several aquifers in the coastal plain which occur below the surficial aquifer as a wedge which begins at the Piedmont Physiographic Province and increases with depth to the east under the entire coastal plain. Although the major source of recharge for the deeper aquifers is associated with the Piedmont Physiographic Province (Harned, 1989; Lautier, 1998) and, recharge also flows downward from the surficial aquifer and also from each aquifer to the next deeper aquifer.

The lower aquifers occur in hydraulically connected sediments within various geologic formations at depth, such that the aquifers do not necessarily correlate with a specific geologic formation. Less permeable deposits, such as silty clay, form confining units between the lower aquifers. Groundwater from the higher aquifers flows downward to lower aquifers at a rate of approximately 1 inch per year (Lautier, 1998). Although this constitutes some recharge to successively lower aquifers, the overall groundwater movement is to the east within each aquifer. Sediment variations laterally within the geologic formations also result in variability with respect to groundwater availability at specific locations.

Decreased groundwater recharge in the Piedmont Physiographic Province results in decreased hydraulic head within the aquifers to the east, within the Coastal Plain Physiographic Province. Additionally, it has been documented that long-term withdrawals near Suffolk, Virginia, have resulted in a groundwater table decrease of 200 feet (McFarland and Bruce, 2006). The decrease in hydraulic head in the Coastal Plain aquifers has already caused salt water intrusion from the ocean in aquifers in northeastern North Carolina and constitutes a threat to Virginia Coastal Plain aquifers (McFarland and Bruce, 2006).

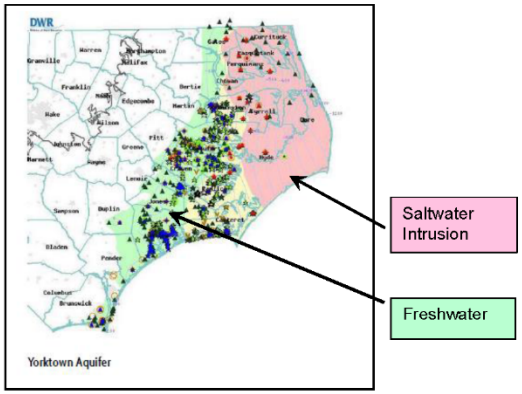


Figure 2.3-2 – Saltwater intrusion into aquifers results when groundwater is over-used and when there is a decrease in the hydraulic gradient of the aquifer (North Carolina Division of Water Resources illustration from http://aquiferstorageandrecovery.weebly.com/saltwater-intrusion-nc.html).

3.0 CONSTRUCTION IMPACTS CAUSED BY DEWATERING ACTIVITIES

It is stated in the DEIS that "when necessary, trench water would be removed and discharged into an energy dissipation/sediment filtration device, such as a geotextile filter bag and/or straw bale structure, to minimize the potential for erosion and sedimentation." Although the DEIS does not include construction details, the International Pipe Line & Offshore Contractors Association (www.iploca.com) provides safety guidelines pertaining to pipeline construction: "[D]ewatering is necessary to be able to excavate a flat, smooth, and stable bottom to lay the pipe… Groundwater movement can also cause material to run off from under the pipe, which could then bend under its own weight as could be unevenly supported. Groundwater removal is also necessary to allow safe and convenient access to the workers who will often perform various tasks in the trench such as inspecting, welding, coating, or repairing. Pipeline buoyancy can also be a problem if water accumulates at the bottom of the trench… Migration of fine materials ("fines") in or out of the pipe zone can result in loss of pipe support and must be prevented. This can be accomplished through the use of waterstops or geofabrics. Water should be removed from the trench before final grading of the bedding. The trench should be kept dry during all phases of pipe installation."

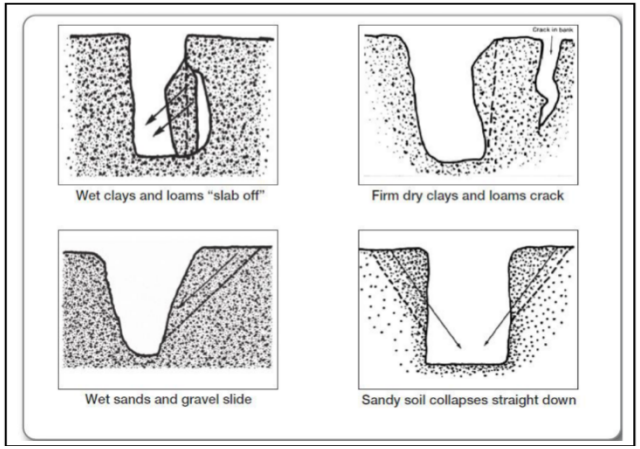


Figure 3.0-1 – Examples of pipeline trench instability (www.iploca.com).

3.1 Consequences of Dewatering

Dewatering of near-surface groundwater or a near-surface perched aquifer removes water from seeps and springs that support aquatic habitats in headwater areas of first order high gradient streams. Deforestation and soil compaction decrease infiltration of precipitation for groundwater recharge. Therefore, the combination of decreased groundwater recharge along with dewatering of near-surface groundwater will result in permanent depletion of water for seeps and springs in headwater areas of first order high gradient streams. It is stated in the DEIS that the mainline trenches for 42-inch diameter pipeline and 36-inch diameter pipeline will be 30 feet wide. This constitutes a substantial area to be dewatered.

CO77-14 Groundwater in karst areas moves through carbonate rocks (limestone, dolostone) as conduit flow. There is no discussion offered by FERC or ACP concerning an evaluation of reduced groundwater recharge to karst aquifers.

CO77-14 Comment noted.

Z-1241

3.2 DEIS Deficiencies Concerning Groundwater Mitigation

CO77-15

It is stated in the DEIS that there would only be localized, temporary alteration of groundwater levels due to deforestation, grading, soil compaction, trenching, and soil stockpiling. It is further stated that groundwater impacts would be minimized by using temporary and permanent trench plug and interceptor dike. These practices are designed to dewater the trench. These practices are inconsistent with preserving the downward migration of precipitation through the soil to bedrock fractures which supply water to seeps and springs in wetland and headwater areas of first order streams high gradient streams in the Appalachian Physiographic Province, the Valley and Ridge Physiographic Province and the Blue Ridge Physiographic Province.

The proposed ACP construction is located on mountain ridges and steep slopes of mountain ridges. These areas are where the greatest amounts of precipitation provide the greatest recharge of groundwater for the river continuum and for conduit flow in karst terrain. As illustrated in **Figure 3.2-1**, when warm air masses encounter the mountains, the air masses rise and become cooler, resulting in precipitation. Precipitation is intercepted by the forest tree canopy so that the rain falls gently on the ground surface. This process reduces stormwater runoff and increases groundwater recharge by facilitating the penetration of water into the soil. Water migrates downward through the soil to recharge groundwater. The groundwater accumulation at higher elevations creates a hydraulic head which forces water downgradient to flow through bedrock fractures, bedding plane partings, and faults. The hydraulic head thereby causes water to replenish wetlands and headwater areas through seeps and springs where the ground surface intercepts bedrock fractures, bedding plane partings, and faults. The hydraulic head causes water to flow into residential wells. The hydraulic head causes water to flow through seeps and springs into streams during times of low stream water, providing a continued source of water to aquatic habitats. The hydraulic head provides water for conduit flow in karst terrains. The hydraulic head in Coastal Plain aquifers prevents saltwater intrusion. Where the hydraulic head is permanently reduced by construction activities because of deforestation, soil compaction, and dewatering for trenches, there will be a depletion of groundwater flow to seeps, springs, wetlands, streams, and residential wells.

CO77-15 Comment noted.

COMPANIES/ORGANIZATIONS COMMENTS

CO77 – Dominion Pipeline Monitoring Coalition (cont'd)

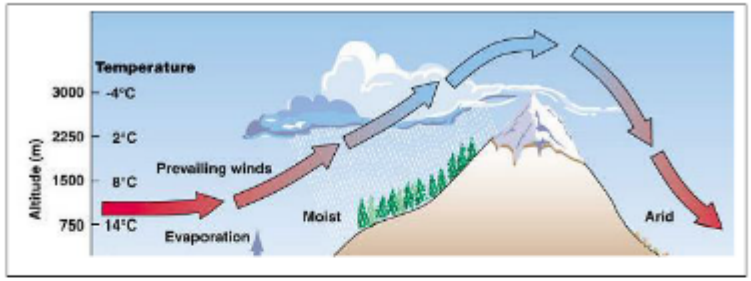


Figure 3.2-1 – When warmer air masses rise over mountainous areas, the air masses become cooler, causing precipitation. Precipitation on forested ridges provides groundwater recharge and sustained hydraulic head to provide water for seeps, springs, wetlands, streams, and residential wells.

3.3 Ground Surface Drainage and Original Contours Cannot Be Restored After Pipeline Construction

CO77-16 It is stated in the DEIS that, " Atlantic and DTI would restore the ground surface to original contours as closely as practicable and restore vegetation on the right-of-way to establish surface drainage and recharge conditions as closely as possible to those prior to construction." Leveling of the rugged mountain terrain for the 125-foot+ wide work corridor will require extensive excavation into hillsides and removal of bedrock outcrops. It is not reasonable to consider that original contours could be restored after construction. Additionally, there are no plans to restore a forested area within the work corridor. It is the forest canopy that intercepts rainfall so that it gently falls to the ground

CO77-17 to penetrate the surficial soils and recharge groundwater. A grassed area cannot accomplish this function.

4.0 IMPERVIOUS AREAS RESULT IN INCREASED STORMWATER DISCHARGE AND INCREASED DOWNSTREAM STREAM BANK EROSION AND SEDIMENT DEPOSITION IN STREAMS

4.1 Greater Stormwater Discharge Results from Impervious Work Corridor Surfaces

A surface runoff coefficient is used in stormwater discharge calculations to determine the peak stormwater runoff discharge for specific storms, such as a 24-hour 2-year

CO77-16 As discussed in section 4.1.4.2, Atlantic has proposed several measures to minimize impacts on steep slopes and ridgetops, including the use of geotechnical inspector and mitigation designs for various slope types.

CO77-17 Comment noted.

storm. A forested area differs from the work corridor ground surface because the tree canopy intercepts the rainfall, allowing the rainfall to gently reach the ground surface. The tree canopy thereby reduces the intensity of the precipitation. Without protection of the tree canopy, there will be greater intensity and, consequently, greater stormwater

CO77-18 runoff amounts and velocities. It is stated in the DEIS that 12,030.7 acres of land would be disturbed and that "Following construction, 5,976.0 acres of new land would be permanently maintained for operation and maintenance of the project facilities. The remaining 6,054.7 acres… would be restored and allowed to revert to former use." This statement is inconsistent with land cover runoff designations used in standard engineering practices. The WV Department of Highways 2007 Drainage Manual (Holmes and Chintala, 2007) provides information for determining sheet flow, which is defined as "a shallow mass of runoff on a plane surface with the depth staying uniform across the sloping surface. Typically, flow depths will not exceed two inches." The sheet flow travel time is determined by an equation that uses a "roughness coefficient" (provided in McCuen, et al, "Hydraulic Design Series 2, Highway Hydrology, October 2002) which reflects the surface roughness over which the surface water is flowing. A gravel surface, which would be similar to the compacted construction work corridor, has a roughness coefficient of 0.024. A grassed surface has a roughness coefficient ranging from 0.15 to 0.24. A forested surface has a roughness coefficient ranging from 0.40 to 0.800. Pipeline construction in originally forested areas will result in measurably higher stormwater discharge rates.

4.2 Greater Stormwater Peak Discharge Results from Deforestation and Impermeable Work Corridor Surfaces

CO77-19 Increased impervious areas not only increase the amount of stormwater discharge to receiving streams, but also increase the frequency of peak runoff rate because the increased amount of impervious areas results in less infiltration (VDCR, 1999). As a consequence, "it takes less rainfall to produce the same *volume* of runoff. Therefore, the *peak rate of runoff* that normally occurs on a 2-year frequency before development, may occur several times a year following development." (VDCR, 1999).

A study of natural channels is presented in Leopold, et al (1964), concluding that natural channels are shaped by the 1½- to 2-year frequency storm event. However, with increased frequency of the 2-year peak rate, increased stream bank erosion will result. The increased impervious areas resulting from the proposed ACP construction activities will therefore result in greater downstream stream bank erosion, which will continue after construction is completed.

Both vertical scour of the stream bed and stream bank erosion release sediment to the streams, increasing embeddedness (**Figure 4.0-1**), which fills in the spaces between pebbles and cobbles in the stream bed. These spaces serve as aquatic habitats for insect larvae and minnows, which are necessary for the food chain within the river continuum (Vannote, et al, 1980).

CO77-18 Comment noted.

CO77-19 There is not enough impervious surface proposed for this project to increase flood rates.

CO77-19 (cont'd)

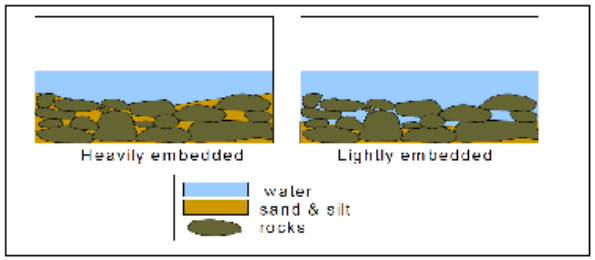


Figure 4.0-1 – Cobbles and pebbles provide aquatic habitats and protection for aquatic organisms. Insect larvae, which constitute the base of the river continuum food chain, reside on the cobbles and pebbles. Minnows and juvenile fish hide in the spaces between cobbles and pebbles for protection. When sand and silt fill the spaces between the cobbles and pebbles, the aquatic habitats and protection areas are destroyed. When the aquatic habitats become heavily embedded or are removed for trenching and stream crossing work spaces, they cannot be restored.

The consequences of embeddedness are provided by Jessup and Dressing (2015) as: "1) Displacement of interstitial habitat space; 2) Clogging of water movement under the channel bed (hyporheic zone); 3) Decreased or altered primary algal productivity; 4) Increased macroinvertebrate drift; 5) Abrasion or smothering of gills and other organs; 6) Uptake of sediment-bound toxicants that are increasingly associated with fine particles; and 7) Larger scale homogenization or disturbance of habitat types."

The Virginia Department of Conservation and Recreation (VDCR) states in its Stormwater Management Handbook (VDCR, 1999) that, "The cumulative effect of sedimentation, scouring, increased flooding, lower summer flows, higher water temperature, and pollution contribute to the overall degradation of the stream ecosystem. Many studies have documented the decline of fish diversity in urbanized watersheds. The aquatic insects which are a major food resource for fish are impacted by the increased sediment load, trace metals, nutrients, and flow velocities. Less noticeable impacts to the stream systems are changes in water temperature, oxygen levels, and substrate composition." Increased stormwater discharge will result from construction impacts to high gradient first order streams. Release of sediments from downstream stream bank erosion and stream bed scour will elevate sediment concentrations and turbidity in the stream water.

The USGS (Krstolic and Chaplin, 2007; Lotspeich, 2009; Messinger, 2009) bankfull discharge classification system for streams in the Appalachian Physiographic Province, the Piedmont Physiographic Province, and the Coastal Plain Physiographic Province is based on streams with watersheds ranging from less than 200 acres to greater than

CO77-19 (cont'd)

160,000 acres in order to show the relationship between peak flow and bankfull discharge. This relationship demonstrates the connectivity between first order high gradient streams and stream systems of higher stream order. Connectivity is related to the River Continuum Concept (Vannote, et al., 1980). "Connectivity" is defined by the Environmental Protection Agency (EPA, 2015) as "the degree to which components of a watershed are joined and interact by **transport mechanisms** that function across multiple spatial and temporal scales." The connectivity descriptors include the following metrics: frequency, duration, magnitude, timing, and rate of change. . . of physical and chemical fluxes to and biological exchanges with downstream waters.

5.0 STREAM CROSSINGS RESULT IN SEDIMENT DEPOSITION IN STREAMS

CO77-20

In the DEIS, it is stated that, "There are 1,989 waterbody crossings on ACP and SHP (some waterbodies are crossed more than once), a number which are classified as warmwater or coldwater fisheries. Several waterbodies that are considered sensitive due to the presence of sensitive aquatic species, such as trout, anadromous fish, or federal or state/commonwealth protected species, would also be crossed. In-stream pipeline construction across waterbodies could impact aquatic species and their habitats, increase sedimentation and turbidity, alter or remove aquatic habitat cover, cause stream bank erosion or scour, impinge or entrain fish and other biota during water withdrawals, and increase the potential for fuel and chemical spills."

The increased sedimentation and turbidity ultimately increase embeddedness. The increased embeddedness constitutes a significant degradation for streams that are classified as warmwater or coldwater fisheries because the juvenile fish hide in the spaces between cobbles and pebbles for protection. Streams are categorizes as Tier 1 (impaired), Tier 2, and Tier 3 (high quality). It is stated in the DEIS that, "Streams cannot be categorized as Tier 1 or Tier 2 at this time, but would be assigned by the WVDEP on a case-by-case basis during permitting…". This statement is inconsistent with information provided on the West Virginia Department of Environmental Protection's (WVDEP) website. Specifically, Tier 1 streams are impaired and designated as 303(d), listed on the DEP website at http://www.dep.wv.gov/WWE/watershed/IR/Documents/IR_2014_Documents/2014FinalIRDocuments/EPAApprovedWebSupplementsOnly.pdf . In compliance with the federal Clean Water Act, Total Maximum Daily Loads (TMDLs) of various contaminants are developed for Tier 1 streams. It is further stated in the DEIS that it is not possible to identify Tier 3 streams and that WVDEP or VDEQ would need to identify these streams. This is inconsistent with information on the WVDEP website, which lists Tier 3 streams: http://www.dep.wv.gov/WWE/Programs/wqs/Documents/Tier%203%20Info/WV_Tier_3_Maps_20101006.pdf , http://www.dep.wv.gov/WWE/Programs/wqs/Pages/default.aspx. Tier 2 streams are all other streams not listed as Tier 1 or Tier 3.

CO77-20 As is stated in section 4.3.2.4, stream surface water classifications (Tiers 1, 2, or 3) would be assigned by the WVDEP on a case-by-case basis during permitting, and may change depending on the timing of the state's 303(d) impaired water list, which is reviewed and updated every 2 years. Appendix K identifies 303(d) waters and their impairment by waterbody. Appendix K also identifies the West Virginia surface water General Use Category assigned by waterbody.

6.0 STREAM WATER QUALITY

6.1 Water Quality Standards

Water quality standards are specified by the Federal Clean Water Act. West Virginia, Virginia, and North Carolina have developed Total Maximum Daily Loads (TMDLs) of contaminants to comply with the Clean Water Act. Additionally, state standards require water quality protection. Water quality standards are specified in WV Code 47CSR2 (http://www.dep.wv.gov/WWE/Programs/wqs/Documents/47CSR2%20070816.pdf), which establishes water quality standards for specific water use categories under §47-2-6. Category A pertains to water supplies for human consumption. Category C pertains to water contact for recreation. In this section, it is stated that "at a minimum all waters of the State are designated for the Propagation and Maintenance of Fish and Other Aquatic Life (Category B)... consistent with Federal Act goals." Category B1 pertains to warm water fishery streams. Category B2 pertains to trout waters. Category B4 pertains to wetlands. Virginia and North Carolina have developed similar TMDLs and have state laws pertaining to the protection of water quality.

Using West Virginia as an example, the following water quality standards (as provided in WV Code 47CSR2) are pertinent for stormwater discharge from the proposed MVP gas pipeline construction. Explanations of the relevance of these parameters are provided along with the limits excerpted from WV Code 47CSR2:

- **Parameter 8.1** Dissolved Aluminum (all Aquatic Life):
  Aluminum is released to stream water with sediment from streambank erosion.
- **Parameter 8.13** Fecal Coliform (all Human Health)
  Fecal coliform is discharged to stream water with stormwater discharge. Sources of fecal coliform include wildlife in forested areas and meadows, livestock in pastures, and pets in urban areas. "Maximum allowable level of fecal coliform content for Water Contact Recreation (either MPN or MF) shall not exceed 200/100 ml as a monthly geometric mean based on not less than 5 samples per month; nor to exceed 400 /100 ml in more than ten percent of all samples taken during the month."
- **Parameter 8.15 Iron** (all Aquatic Life and Water Supplies for Human Consumption):
  Iron is released to stream water with sediment from streambank erosion. "Iron concentration limits are 1.5 mg/L for Water Supplies for Human Consumption; 1.5 mg/L for B1 and B4 Aquatic Life; and 1.0 mg/L for B2 Aquatic Life."
- **Parameters 8.26 and 8.26.1 Radioactivity** (all Aquatic Life, all Human Health, and all Other Uses):
  The intended gas to be transported in the proposed MVP gas pipeline is derived from hydrofracturing of Marcellus shale and associated rock units. Marcellus shale is contains naturally occurring radioactive elements which are transported

in the gas. Radon is one of the elements, which breaks down into lead, considered a toxin. Where pig launchers are located, the gas escapes to the surrounding area. Cleaning operations at the pig launcher locations release radon and lead to the surrounding area. In reference to Parameter 8.26: "Gross Beta activity is not to exceed 1000 picocuries per liter (pCi/l), nor shall activity from dissolved strontium-90 exceed 10 pCi/l, nor shall activity from dissolved alpha emitters exceed 3 pCi/l." In reference to Parameter 8.26.1: "Gross total alpha particle activity (including radium-226 but excluding radon and uranium shall not exceed 15 pCi/l and combined radium-226 and radium-228 shall not exceed 5pCi/l; provided that the specific determination of radium-226 and radium-228 are not required if dissolved particle activity does not exceed 5pCi/l; the concentration of tritium shall not exceed 20,000 pCi/l; the concentration of total strontium-90 shall not exceed 8 pCi/l in the Ohio River main stem."

- **Parameter 8.29 Temperature** (Aquatic Life B1):
  Increased turbidity from sediment discharged to streams results in increased temperatures. Deforestation also results in higher temperatures and can be detrimental to aquatic species in the headwater areas of first order high gradient streams. "Temperature rise shall be limited to no more than 5ºF above natural temperature, not to exceed 87ºF at any time during months of May through November and not to exceed 73ºF at any time during the months of December through April. During any month of the year, heat should not be added to a stream in excess of the amount that will raise the temperature of the water more than 5ºF above natural temperature. In lakes and reservoirs, the temperature of the epilimnion should not be raised more than 3ºF by the addition of heat of artificial origin. The normal daily and seasonable temperature fluctuations that existed before the addition of heat due to other natural causes should be maintained."
- **Parameter 8.33 Turbidity** (Aquatic Life B1, B2, B4; and Human Health A and C):
  Turbidity results from the introduction of sediment into stream water. Sediment is introduced to stream water from stormwater discharge and from streambank erosion. "No point or non-point source to West Virginia's waters shall contribute a net load of suspended matter such that the turbidity exceeds 10 NTU's over background turbidity when the background is 50 NTU or less, or have more than a 10% increase in turbidity (plus 10 NTU minimum) when the background turbidity is more than 50 NTUs. This limitation shall apply to all earth disturbance activities and shall be determined by measuring stream quality directly above and below the area where drainage from such activity enters the affected stream. Any earth disturbing activity continuously or intermittently carried on by the same or associated persons on the same stream or tributary segment shall be allowed a single net loading increase."

The 2006 West Virginia Erosion Sediment Control BMP Manual, revised August 2016, (http://www.dep.wv.gov/WWE/Programs/stormwater/csw/Documents/E%20and%20S_BMP_2006.pdf) further explains that, "The primary numeric water quality standard addressing earth disturbing activities is turbidity. Other criteria that could be violated by runoff from a construction project include pH and iron. Turbidity is defined as an expression of the optical property that causes light to be scattered and absorbed rather than transmitted in straight lines through the sample. It is an indirect measurement of how much suspended material is in a sample of water."

The U.S. Environmental Protection Agency (EPA) is the regulatory agency for the Clean Water Act Section 402 Stormwater Permit. It is specifically stated by EPA that, "The pollutant of concern during oil and gas-related construction is usually sediment (expressed as total suspended solids or turbidity). Regardless of the type of pollutant(s) in a discharge, all water quality standards of the receiving waterbody must be protected." (https://www.epa.gov/npdes/oil-and-gas-stormwater-permitting#when).

6.2 Total Maximum Daily Loads

The Erosion and Sediment Control Best Management Practices Manual (E&SC-BMP, WVDEP, 2006) explains: "If construction activities will contribute pollutants for which a specific receiving water is listed as impaired, permittees must comply with Total Maximum Daily Loads (TMDLs) set for the receiving stream. Construction sites may be designated as contributors to the impairment if a stream is listed as impaired because of sediment or iron."

7.0 AREAS MOST SUSCEPTIBLE TO EROSION

7.1 Documentation of Sediment Release During Construction Activities Using the Revised Universal Soil Loss Equation (RUSLE2)

In 1978, Wischmeier and Smith published the Universal Soil Loss Equation (USLE) to estimate the soil loss due to erosion, which occurs naturally and during changes in land use, such as construction. In 2013, the U.S. Department of Agriculture – Agricultural Research Service published the Revised Universal Soil Loss Equation, Version 2 (RUSLE2) to estimate the amount of sediment transported to receiving streams, based on soil, slope, land cover, and land use information. The U.S. Geological Survey (USGS) conducted a study (USGS Study), described in USGS Fact Sheet FS-109-00 (Owens, et al, August 2000) to evaluate 1) the increase in sediment transported during construction; and 2) the predictability of the Universal Soil Loss Equation. During the study, the USGS monitored rainfall depth and intensity, water quality, water level, and water runoff volume (discharge) for a 1.72-acre commercial site with a slope of 8 percent and a 0.34-acre residential site with a slope of 4 percent. Pre-construction, during-construction, and post-construction results of the USGS Study included: 1) there

was excellent agreement between the soil loss loads predicted by using the USLE calculations and the actual, measured sediment load; 2) the sediment load was 107 times greater during construction at the commercial site and 4 times greater at the residential site; and 3) rainfall intensity was responsible for the greatest concentrations of total and suspended solids. Where sediment is released to receiving streams during construction activities, the sediment accumulates in the stream beds, increasing embeddedness, which remains in the stream bed after construction has been completed.

7.2 Inadequate Information Provided in the DEIS Pertaining to the Use of RUSLE2

CO77-21 In the DEIS Supplements provided on January 10, 2017 by ACP to FERC, an example of RUSLE2 calculations is presented in Appendix P. The example consists of using overall soil complexes rather than individual soils series, so there is no specific information about the amount of silt, clay, or sand content. Additionally, RUSLE2 calculations use stormwater discharge as one of the variables. Discharge is calculated using the area of a specific drainage basin. In the ACP example, there is no description of the drainage basin area being used. Instead, two non-descript areas in Bath County, Virginia, are referenced by slope steepness. The information provided in Appendix P of the DEIS does not provide adequate information to determine soil loss amounts in specific areas.

7.3 Steep Slope Failure: Soil Landslides

CO77-22 It is stated in the DEIS that a considerable extent of the proposed ACP construction area is susceptible to landslides: "In West Virginia, 73 percent of the AP-1 mainline route would cross areas with a high incidence of and high susceptibility to landslides. In Virginia, approximately 28 percent of the AP-1 mainline route would cross areas with a high incidence of and high susceptibility to landslides (Highland, Bath, Augusta, and Nelson Counties); 21 percent would cross areas with a moderate incidence of and high susceptibility to landslides (Augusta, Nelson, and Buckingham Counties); and 7 percent would cross areas with a moderate incidence of and moderate susceptibility to landslides (Augusta County)." It is further stated that colluvium was observed on most of the steep slopes. Colluvium consists of sediments, including clay-sized up to boulder-sized sediments, which is deposited downslope by mass-wasting or overland flow. It is further stated in the DEIS that "Signs of creep were often observed in the colluvium." Also, the creep in the colluvium "can be an indication that slope instability could be induced during pipeline construction activities." Creep is indicative of continued downslope movement of the observed colluvium. With continued creep during and after construction, sediment will continue to move downslope toward receiving streams and sinkholes.

In the construction details provided in Appendix C of the supplementary DEIS documents provided on January 10, 2017 by ACP to FERC, a revised landslide

CO77-21 See response to comment CO77-8.

CO77-22 Comment noted.

CO77-22 (cont'd) mitigation design is provided for two steep slope areas, one of which is within the Monongahela National Forest and the second one of which is within the George Washington National Forest, along the proposed ACP construction area. The plan includes placement of rip-rap at the base of the slope. However, the plan does not include an area where the rip-rap would be "keyed" into stable underlying material. If the rip-rap is not properly keyed into stable material, it will fail during a landslide. Also, soil nails are shown to extend 8 feet to 15 feet through a surficial steel mesh blanket intended to stabilize the colluvium. The construction drawings and narrative do not provide information about the depth to bedrock or the use of soil nails where bedrock is encountered. The depth to bedrock is 20 inches to 40 inches at numerous locations where steep slopes occur along the proposed ACP construction area. Although the locations and results are not provided, it is stated in the DEIS that soil test pits were excavated to depths of 50 inches. If bedrock is deeper than 50 inches, even though the trench for the proposed ACP construction is approximately 10 feet deep in these locations, there appears to be no substantial data to ascertain the depth to bedrock for placement of soil nails. Specific soils information is provided by the Natural Resources Conservation Service (NRCS). The specific soils information provides the depth to bedrock for each soils series. In the DEIS, a table is presented that provides the acreage of soils classified as shallow to bedrock. However, there is no comprehensive table providing the specific soils which are present between specific mile posts along the proposed ACP route.

7.4 Steep Slope Failure: Bedrock Landslides

CO77-23 The DEIS does not present any measurements for bedrock orientation on the numerous steep slopes extending along the proposed ACP construction area. In the Appalachian Plateau Province, the bedrock is predominantly flat-lying. The bedrock consists mostly of interbedded shale, siltstone, and sandstone, which becomes unstable due to differential weathering. The shale and siltstone weather more quickly than the sandstone. The weaker shale and siltstone deteriorate such that the overlying sandstone moves downslope when it is no longer supported by the weathered shale and siltstone. In West Virginia, the West Virginia Geological and Economic Survey (WVGES) has determined that landslide-prone areas occur mostly on slopes of 15% to 45% on red shale bedrock. Such slopes are pervasive throughout the areas in West Virginia where the ACP route is proposed. Therefore, there is potential for significant landslide occurrences that would result from construction of the proposed ACP in West Virginia.

In the Valley and Ridge Physiographic Province and the Blue Ridge Physiographic Province, the bedrock has been tilted and deformed by tectonic processes in the geologic past. The bedrock consists of interbedded limestone, shale, siltstone, sandstone in these physiographic provinces. Where bedrock is tilted away from the work area, the limestone, shale, and siltstone deteriorate more quickly than the sandstone such that the sandstone moves downslope when no longer supported by the bedrock that weathers more quickly. Where the bedrock is oriented downslope, bedrock slabs move downslope as landslides. Soil nails and wire mesh netting are inconsequential in preventing the movement of bedrock slabs.

CO77-23 Comment noted.

CO77-23 (cont'd) At all steep slope locations, the bedrock is fractured and there are bedding plane partings and faults. The fractures and faults are usually at angles to the bedding plane partings, facilitating the movement of bedrock wedges downslope. Information is provided in the DEIS pertaining to the contours and the steep slopes; however, there is no information about the bedrock orientation or the orientation of fractures and faults.

8.0 DEIS DEFICIENCIES OF BEST MANAGEMENT PRACTICES

CO77-24 Best Management Practices (BMPs) provide the only methods of managing stormwater runoff in order to satisfy the requirements of the stormwater permits for which ACP has not yet received. Evaluations of BMPs indicate that there will always be a certain percentage of sediment in the stormwater discharge from a construction site that will discharge to receiving streams. Although ACP has not provided construction details or BMP typical drawings, the following BMPs are typically used in gas pipeline installation areas:

- Temporary ROW Diversion Berm and Sediment Trap Outlet
- Silt Fence, Super Silt Fence and Belted Silt Retention Fence
- Compost Filter Sock
- Waterbars
- Trench Plugs
- Erosion Control Blanket/Flexterra/or equivalent
- Vegetative Stabilization

There are numerous ratings for BMPs, providing a range of percent effectiveness values. However, there is agreement that none of the BMPs can provide 100 percent effectiveness. In the Universal Soil Loss Equation guidance document prepared by Wood (2015), the percent effectiveness is provided for the following: sediment trap, 80 percent; silt fence, 40 percent; vegetative buffer, 40 percent.

8.1 Temporary ROW Diversion Berm and Sediment Trap Outlet

This BMP typically consists of a sediment berm and ditch. The sediment trap outlet is typically directed onto adjacent land. It is important to avoid concentrated flows where the water is directed from the sediment berm to the outflow area in order to avoid additional erosion hazards. The West Virginia Erosion and Sediment Control-BMP Manual (E&SC-BMP Manual) specifies that the drainage area for this type of BMP should not exceed 5 acres and that the minimum cross section should be adequate for the anticipated flows but at a minimum must handle the peak discharge from a 2-year/24-hour storm. ACP has not provided any drainage areas or peak discharge calculations.

CO77-24 Comment noted.

CO77-24 (cont'd)

8.2 Silt Fence, Super Silt Fence and Belted Silt Retention Fence

The E&SC-BMP Manual states that, "Silt fence does not actually filter sediment from muddy water", and cautions that, "Intercepted sediment laden water must always be diverted to a sediment trap or sediment basin, never silt fence." Additionally, the ES&C-BMP Manual provides that silt fence is installed properly only when it is "placed on the contour", that is, perpendicular to the flow of the water. ACP has not provided any construction plan sheets to reference proper placement of silt fencing.

8.3 Compost Filter Socks, Pumped Water Filter Bags

The E&SC-BMP Manual provides velocity maximums for various conveyances in accordance with slope and material. It is critical that the Compost Filter Socks and Pumped Water Filter Bags are in compliance with the velocity maximums. Delineations of drainage areas are a requirement for velocities to be calculated. ACP has not provided any drainage delineations, construction plan sheets, or calculations determining runoff velocities.

8.4 Erosion Control Blanket/Flexterra/or equivalent and Vegetative Stabilization

The E&SC-BMP manual explains that "Erosion Control Blanket/Flexterra/or equivalent" consist of netting or blanket materials that are used to stabilize disturbed surfaces and promote the establishment of vegetation. They function by protecting the ground surface from the impact of raindrops and stabilize the surface until vegetation can be established. ACP has stated the use of steel mesh blankets at potential landslide locations. However, the steel mesh blankets will only serve to prevent smaller rocks from falling downslope, uncontrolled. Rock slabs and soil slumps will not be kept in place by the steel mesh blankets.

8.5 Sediment Basins

One of the basic sediment control plan elements stated by the WVDEP (http://www.dep.wv.gov/WWE/Programs/stormwater/csw/Documents/E%20and%20S_BMP_2006.pdf) is that "Prior to leaving a construction site, surface water runoff from disturbed areas shall pass through a sediment basin/trap or other appropriate and approved sediment removal BMP." The WVDEP Erosion Sediment Control BMP manual states as an element that "Points of discharge and receiving streams shall be protected from erosion due to increases in the volume, velocity, and peak flow rate of surface water runoff from the project site."

Z-1253

CO77-24 (cont'd)

The stormwater permit includes the definition of a "sediment basin" as "a temporary structure consisting of an earthen embankment, or embankment and excavated area, located in a suitable area to capture sediment-laden runoff from a construction site. A sediment basin reduces the energy of the water through extended detention (48 to 72 hours) to settle out the majority of the suspended solids and sediment and prevent sedimentation in waterways, culverts, streams and rivers. Sediment basins have both wet and dry storage space to enhance the trapping efficiency and are appropriate in drainage areas of five acres and greater." ACP has not provided any stormwater discharge calculations for sizing sediment basins.

The Virginia Department of Environmental Quality's (DEQ) Stormwater Management Manual (1999), states that for high intensity rainfall events, a bypass or diversion structure is needed to allow large stormwater flows to bypass the BMP, thereby preserving its integrity and avoiding flushing of previously captured sediments. This results in sediment laden stormwater discharge to receiving streams.

Additionally, the DEQ states that with greater stormwater runoff from deforested land surfaces, a greater volume of runoff will be stored in the sediment basin, with a consequent longer duration of storage. Because the deforested land surfaces increase the frequency of peak runoff, water in the sediment basin accumulates more frequently, in addition to being stored longer. The result is that the sediment basin can quickly degrade.

8.6 Trench Plugs

Trench plugs consist of relatively impermeable material placed in the trench to capture water in the trench and direct the water downslope through a pipe toward a water bar. The water is then directed downslope in an adjacent area. Depending on the volume of water diverted by the water bar, the outflow may exhibit concentrated flow which will cause additional erosion.

9.0 CUMULATIVE IMPACTS

Cumulative adverse impacts from construction of the proposed ACP result not only from the physical extent of the proposed construction, but also from the specific location of the proposed construction on mountain ridges and steep slopes. The Environmental Protection Agency (EPA, 2015) stresses that, "All tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported. Streams are the dominant source of water in most rivers, and the majority of tributaries are perennial, intermittent, or ephemeral headwater streams. Headwater streams also convey water into local storage compartments such as ponds, shallow aquifers, or

stream banks, and into regional and alluvial aquifers; these local storage compartments are important sources of water for maintaining baseflow in rivers."

Rosgen (1994) developed a methodology for classifying stream types that provides criteria for determining the stream type's sensitivity to disturbance, the sediment supply, and the streambank erosion potential influence. Metrics for determining stream type sensitivity include measurements of stream slope, stream bed material, bankfull discharge, entrenchment (ratio of the width of the flood-prone area to the bankfull width of the channel), and sinuosity. The U.S. Geological Survey (USGS) used the Rosgen metrics to develop bankfull discharge curves in order to typify stable streams in different physiographic provinces (Krstolic and Chaplin, 2007; Lotspeich, 2009; Messinger, 2009). When the typical bankfull discharge for a stream changes, the stream is no longer stable. Bankfull discharge is exceeded due to higher peak flows of stormwater runoff.

CO77-25 Use of these metrics, along with the Universal Soil Loss Equation (USLE) or Revised Universal Soil Loss Equation (RUSLE) and with determination of the increase in stormwater discharge due to the proposed ACP construction, provides the foundation for determining the significance of environmental damage to streams resulting from the proposed ACP construction.

In order to evaluate the interactions of precipitation, stormwater discharge, groundwater recharge and retention, and stream baseflow, calculations must be performed at the headwater tributary level. Because first order high gradient streams are well defined and are considered to provide the basis for watershed evaluation (USFWS, 2007), it is essential to select these smaller watersheds, typically 200 acres in size, to evaluate the impact of construction projects.

Cumulative impacts can be assessed by measurements and calculations. Cumulative impacts due to deforestation and soil compaction (creation of impervious surfaces) can be measured in watersheds of first order streams, second order streams, and third order streams. Increased stormwater discharge from construction activities can be calculated by use of standard engineering equations. Increased sediment discharge from construction activities can be predicted by the use of the Revised Universal Soil Loss Equation. Increased stream bank erosion due to increased stormwater discharge can be estimated from bankfull discharge curves. Cumulative adverse impacts to groundwater can be measured by stream baseflow calculations.

However, in the DEIS, it is simply stated that the proposed ACP construction "would result in temporary to long-term impacts on aquatic resources. Long-term impacts related to slope instability adjacent to streams has the potential to adversely impact water quality and stream channel geometry, and therefore downstream aquatic biota. Atlantic and DTI would attempt to mitigate these impacts…". Increased sedimentation in streams causes permanent increased embeddedness. Colluvial creep on steep slopes is continuous and will provide a permanent supply of sediments to receiving streams. Deforestation, soil compaction, and dewatering will permanently deplete

CO77-25 The EIS was prepared in accordance with NEPA, CEQ guidelines, and other applicable requirements. The EIS is consistent with FERC style, formatting, and policy regarding NEPA evaluation of alternatives and different types of impacts, including cumulative impacts.

Section 4.2.3 considers the use of the Universal Soil Loss Equation. Based on the analysis, construction practices would temporarily increase the erosion potential for soils crossed by the project, but erosion rates should return to acceptable levels once final restoration has been completed. Cumulatively, we consider these impact acreages to be relatively small overall and unlikely to contribute to cumulative impacts, particularly considering that most soils would be returned following construction, as stated in section 4.13.3.2.

CO77-25 (cont'd)

groundwater flow to seeps and springs that provide water to wetlands, headwater areas, stream baseflow, and residential wells, and will permanently reduce the groundwater hydraulic gradient. In the Coastal Plain Physiographic Province, the decreased hydraulic gradient will result in permanent saltwater intrusion. In karst terrain, decreased groundwater will permanently degrade cave environments and flow to springs.

10.0 CONCLUSIONS

There will be permanent, significant adverse impacts to extensive areas where the ACP construction is proposed. These impacts include:

1) Permanent increased stormwater discharge to streams due to deforestation and soil compaction in the proposed pipeline construction areas;

2) Continual downstream stream bank erosion and stream bed due to increased stormwater discharge from the proposed pipeline construction areas;

3) Continual release of sediment to streams, causing continual turbidity and permanent embeddedness;

4) Continual degradation of the functions within first order high gradient streams, which will adversely impact the food chain in the River Continuum;

5) Increased threat of landslides where proposed construction disturbs steep slopes;

6) Depletion of groundwater resources due to impervious surfaces and dewatering;

7) Decrease of the groundwater hydraulic head which moves groundwater to streams and residential wells, and prevents saltwater intrusion into coastal plain aquifers.

Best Management Practices simply do not prevent all sediment from a construction site from being transported by stormwater discharge to receiving streams. It is stated in the DEIS that these impacts would only be temporary and localized. However, the location of the proposed ACP construction within sensitive watersheds of first order high gradient streams will permanently impact the entire River Continuum.

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Curriculum vitae for

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My education includes a bachelor's degree in Geology and a doctoral degree in Marine Science (specializing in Marine Geology), both from the College of William and Mary in Williamsburg, VA. I have a Credential in Ground Water Science from Ohio State University and I am a Licensed Professional Geologist. I have held teaching positions at the high school level and at the college level, and have provided geology and hydrogeology presentations, workshops, and classes to state and federal environmental employees, to participants in the Regional Conference in Cumberland, MD for the American Planning Association, and to participants in the WV Master Naturalist classes. I have served as an expert witness in hydrogeology before West Virginia government agencies.

As a Hydrogeological Consultant (2000 – Present), I have conducted hydrogeological investigations, provided hydrogeological assessment reports, served as an expert witness in hydrogeology before the West Virginia Public Service Commission in three cases and before the West Virginia Environmental Quality Board in one case, and provided numerous presentations and workshops in hydrogeology to state and federal environmental employees (including USFWS and WV FEMA Managers), participants in the Regional Conference in Cumberland, MD for the American Planning Association, participants at civic and landowner meetings, and participants in the WV Master Naturalist classes.

As a Senior Geologist for the Virginia Department of Environmental Quality (1997-1999), I determined direction of groundwater flow and the pollution impacts to surface water and groundwater at petroleum release sites and evaluated corrective actions conducted where petroleum releases occurred. At sites where the Commonwealth of Virginia assumed responsibility for the pollution release investigation and corrective action implementation, I managed the site investigations for the Southwest Regional Office of the Virginia Department of Environmental Quality (DEQ). This included project oversight from contract initiation through closure.

As a Senior Geologist and Project Manager for the Environmental Department at S&ME, Inc. (Blountville, TN, 1992-1997), I conducted geology and groundwater investigations. I supervised technicians, drill crews, geologists, and subcontractors. The investigations were conducted in order to obtain permits for landfill sites and to satisfy regulatory requirements for corrective actions at petroleum release sites. My duties also included conducting geophysical investigations using seismic, electrical resistivity, and ground penetrating radar techniques. I conducted numerous environmental assessments for real estate transactions. I also conducted wetlands delineations and preparation of wetlands mitigation permits.

As the District Geologist for the Virginia Department of Transportation (1985-1992), my job duties included obtaining and interpreting geologic data from fieldwork and review of drilling information in order to provide foundation recommendations for bridge and road construction. My duties included supervision of the drill crew and design of asphalt and concrete pavements for highway projects. Accomplishments included preliminary foundation investigations for interstate bridges and successful cleanup of leaking underground gasoline storage tanks and site closures at numerous VDOT facilities.

While earning my doctoral degree at the College of William and Mary, I worked as a graduate assistant on several grant-funded projects. My work duties included measuring tidal current velocities and tidal fluctuations at tidal inlets; land surveying to determine the geometry and morphology of numerous tidal inlets; determining pollution susceptibilities of drainage basins using data from surface water flow parameters, hydrographs, and chemical analyses; developing a predictive model for shoreline erosion during hurricanes based on calculations of wave bottom orbital velocities resulting from various wind velocities and directions; performing sediment size and water quality analyses on samples from the Chesapeake Bay and James River; conducting multivariate statistical analyses for validation of sediment laboratory quality control measures; reconnaissance mapping of surficial geologic materials in Virginia, North Carolina, and Utah for publication of USGS Quaternary geologic maps; teaching Introductory Geology laboratory classes at the College of William and Mary; and serving as a Sea Grant intern in the Department of Commerce and Resources, Virginia.

EDUCATION:

College of William and Mary
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Ph.D., 1984
Major: Marine Science (Marine Geology)

College of William and Mary
Williamsburg, VA 23185
B.A., 1972
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Flint Hill Preparatory
Fairfax, VA
High School Diploma, 1968

JOB-RELATED TRAINING COURSES:

2007: Certified Volunteer Stream Monitor, West Virginia (Dept. of Environmental Protection)
2006: Certified Master Naturalist, West Virginia (Dept. of Natural Resources)
1996: Karst Hydrology, Western Kentucky University
1996: Global Positioning Systems (GPS) for Geographic Information Systems (GIS) applications, seminar conducted by Duncan-Parnell/Trimble
1995: Safe Drinking Water Teleconference, sponsored by the American Water Works Association
1992-1998: OSHA Hazardous Waste Site Supervisor training with annual updates
1990: Credential in Ground Water Science, Ohio State University

JOB-RELATED LICENSE:

Licensed Professional Geologist: TN #2529

PROFESSIONAL ORGANIZATIONS

Geological Society of America

West Virginia Academy of Sciences

National Speleological Society

COMPANIES/ORGANIZATIONS COMMENTS

CO78 – Augusta County Alliance

April 6, 2017

Contact: Nancy Sorrells
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Citizens call on FERC to slow down ACP approval process

The Augusta County Alliance (ACA), acting on behalf of hundreds of concerned citizens, submitted a petition containing almost 600 names to the Federal Energy Regulatory Commission (FERC) as part of the Draft Environmental Impact Statement process for the Atlantic Coast Pipeline (ACP) on Thursday (April 6, 2017). The *We the People Petition* asks that the ACP application process be slowed down in order to "More fully, thoughtfully, and transparently assess the pros and cons of the ACP" while taking into consideration a number of questions spelled out in the document.

The petition, recently launched on-line through the Augusta County Alliance website and also in a paper form, has now garnered close to 600 signatures and the list continues to grow. ACA Co-chair Nancy Sorrells said that she believes "this petition helps put a face on the pipeline issue and exposes Dominion's disingenuous public relations efforts that claim that the pipeline is in everyone's best interests."

Those signing the petition are not just persons whose property is directly impacted by the pipeline but also include hundreds of others concerned about the pipeline's impacts to all communities, families, farms, businesses, schools, and public lands in the path of the project. "They want to ask questions and they want to get truthful answers and to be a part of the decision-making process," said Sorrells. "The effects of this pipeline will extend far beyond the footprint of the project and people have a right to know if their quality of life is being compromised for a corporation's private profit."

The petitions asks FERC, the U.S. Forest Service, the Virginia Department of Environmental Quality, the U.S. Army Corps of Engineers, and all other local, state, and federal decision making bodies to consider the following questions:

CO78-1 • Do we already have sufficient pipeline capacity to meet energy demands in Virginia, West Virginia, and North Carolina?

CO78-2 • What are other energy efficiencies and alternatives to consider, such as solar and wind?

CO78-3 • Are the routes being proposed by Dominion the least disruptive routes to the states, our farmlands, our communities, and to the well-being of citizens?

CO78-4 • What are the short-term and long-term safety and economic impacts on our forests, farmlands, water, schools, and communities?

CO78-5 • Is the use of eminent domain (the "taking" of private land) by a for-profit corporation at the expense of the rights of its citizens to possess property and pursue life, liberty and happiness considered constitutional?

CO78-6 • Should there be a better assessment of the jobs to be gained in the short and long term and whether other energy resource projects might provide an equal number (or more) of jobs?

Nancy T. Sorrells, Co-chair, 3419 Cold Springs Road, Greenville, VA 24440
540-292-4170 Email: info@augustacountyalliance.org Website: www.augustacountyalliance.org

CO78-1 See the response to comment CO46-1.

CO78-2 See EIS section 3.

CO78-3 See EIS section 3.

CO78-4 Sections 4.9 and 4.12 discuss socioeconomic and reliability and safety impacts, respectively, of ACP and SHP.

CO78-5 See the response to comment CO50-2.

CO78-6 The EIS discusses the short- and long-term jobs associated with the ACP and SHP projects. It is outside of the scope of this EIS to evaluate the number of jobs that alternative energy projects might provide.

CO78-7

- Is there a more comprehensive way to examine safety considerations, including the ramifications of leaks and explosions, the potential threat of terrorism and the question of why newer pipelines are failing at a faster rate than older pipelines?

Although comments for the DEIS just closed this week, it is already abundantly clear that there are lengthy lists of inadequacies in the report that will negatively affect hundreds of thousands of people. And, in spite of that fact, Dominion continues to move ahead with confidence that its project is a done deal. The *We the People Petition* is a continued appeal to the democratic principles on which this country was founded and a request to leaders that this project is not a done deal.

One has to look no further than just a few miles from the proposed route of the ACP in order to gather purpose for the meaning of the *We the People Petition*. Thomas Jefferson, Virginia Governor and U.S. President, once said: "I know of no safe depository of the ultimate powers of the society but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion by education. This is the true corrective of abuses of constitutional power."

The petition will continue to garner signatures and updates will continue to be sent to appropriate agencies, boards, and elected leaders. The petition can be accessed at augustacountyalliance.org.

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A copy of the We the People Petition is attached.

A copy of the current list of We the People signers will be sent upon request.

The We the People Petition can be accessed at www.AugustaCountyAlliance.org

CO78-7 As described in section 4.12, ACP would be constructed and operated in accordance with the DOT's requirements for safety under 49 CFR 192. See also the response to comment CO48-11.

COMPANIES/ORGANIZATIONS COMMENTS

CO78 – Augusta County Alliance (cont'd)

We the People of Virginia (and West Virginia and North Carolina)

...are mothers and fathers, sons and daughters, farmers and landowners, small and large business owners, veterans, health care providers, senior citizens, retirees, taxpayers, teachers, students, property rights advocates, environmentalists, restaurateurs, civil servants, church goers, republicans, democrats, voters, hunters, anglers, hikers, bikers, birders, artists, musicians, and members of communities large and small. As proud citizens of the Commonwealth of Virginia ***we have a right to be heard and to have input into decisions pertaining to the Atlantic Coast Pipeline (ACP).***

We therefore respectfully and collectively call on Dominion Resources, Inc., our local, state, and federal representatives, the Federal Energy Regulatory Commission (FERC), the U.S. Forest Service (USFS), the Virginia Department of Environmental Quality, the U.S. Army Corps of Engineers, and all other local, state, and federal decision making bodies to slow the approval process down in order to more ***fully, thoughtfully, and transparently*** assess the pros and cons of the ACP, taking into consideration the following:

1. Do we already have sufficient pipeline capacity to meet energy demands in Virginia, West Virginia, and North Carolina?
2. What are other energy efficiencies and alternatives to consider, such as solar and wind?
3. Are the routes being proposed by Dominion the least disruptive routes to the states, our farmlands, our communities, and to the well-being of its citizens?
4. What are the short-term and long-term safety and economic impacts on our forests, farmlands, water, schools, and communities?
5. Is the use of eminent domain ("taking" of private land) by a for-profit corporation at the expense of the rights of its citizens to possess property and pursue life, liberty, and happiness considered constitutional?
6. Should there be a better assessment of the jobs to be gained in the short and long term and whether other energy resource projects might provide an equal number (or more) of jobs?
7. Is there a more comprehensive way to examine safety considerations, including the ramifications of leaks and explosions, the potential threat of terrorism and the question of why newer pipelines are failing at a faster rate than older pipelines?

Note: These signatures are being collected and compiled through the Augusta County Alliance, 3619 Cold Springs Rd. Greenville, VA 24440. Attention: Nancy Sorrells. Sign on at the website at www.AugustaCountyAlliance.org or email info@AugustaCountyAlliance.org

Respectfully signed,

Name, Business, or organization City and/or County

The attachments to this letter have been reviewed by FERC staff and can be found on the FERC eLibrary site under FERC Accession No. 20170406-5152.

COMPANIES/ORGANIZATIONS COMMENTS

CO79 – Living River Restoration Trust

April 5, 2017

Nathaniel J. Davis, Sr. Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

RE: Draft Environmental Impact Statement Regarding Atlantic Coast Pipeline, Supply Header Project, and Capacity Lease Proposal

Dear Mr. Davis,

Thank you for the opportunity to provide comments on the Environmental Impact Statement regarding the proposed Atlantic Coast Pipeline project. The Living River Restoration Trust is appreciative of Dominion Resources for meeting with us twice on this topic and we understand the following proposed mitigation is under consideration.

CO79-1

We are submitting this letter in response to the Atlantic Coast Pipeline proposal to construct a pipeline across property known as the Chesapeake Wetland Mitigation Bank, located near Mile Post 75 in the City of Chesapeake, Virginia. The Living River Restoration Trust is the third-party holder of a conservation easement placed on this property to protect and conserve the high conservation values within the property. The proposed Atlantic Coast Pipeline project will negatively and permanently impact the conservation value of land located along the southern boundary of the Chesapeake Wetland Mitigation Bank property under conservation easement protection.

The Chesapeake Wetland Mitigation Bank conservation easement protects the high conservation values of the property and prevents any activity on or use of the protected property that is inconsistent with the purposes of the conservation easement. The conservation easement specifically prohibits: 1) Commercial structures that may result in a conversion of wetlands, or causes a net loss of ecosystem services or functions, 2) excavation or ditching on the property, and 3) motorized vehicle use on the property not on existing access roads or trails.

The current alignment of the proposed Atlantic Pipeline will traverse the southern boundary of the 543.88-acre parcel between mile markers 74.8 and 76. Construction is anticipated to impact 11.5 areas of forested wetlands, which represent some of the highest conservation values in the wetland bank.

At a May 2, 2016, meeting with representatives from Dominion Resources and Atlantic Coast Pipeline, the Living River Restoration Trust was asked to present Dominion Resources with a restoration project and/or proposal that could serve to offset the

Living River Restoration Trust

475 Water Street, Suite C103A
Portsmouth, Virginia 23704
Phone: 757-399-7487 | Fax: 757-397-8377
www.LivingRiverTrust.org

CO79-1 Section 4.3.3.3 has been updated to identify the bank crossing, and summarizes your discussions with Atlantic.

COMPANIES/ORGANIZATIONS COMMENTS

CO79 – Living River Restoration Trust (cont'd)

CO79-1 (cont'd)

proposed pipeline's negative impact on the conservation values protected by the Chesapeake Wetland Mitigation Bank conservation easement. In a letter to Dominion Resources dated February 17, 2017, and during a follow-up meeting held on March 16, 2017, the Living River Restoration Trust presented Dominion Resources with the following proposal:

To offset the negative impact from the pipeline construction, the Living River Restoration Trust recommends Dominion Resources purchase an adjacent 600-acre land parcel located at 4409 Peach Road (Tax ID 0320000000930) that is similar in nature to the land that will be negatively impacted by the pipeline within the Chesapeake Wetland Mitigation Bank. The 4409 Peach Road parcel was recommended for the following reasons:

1) The 4409 Peach Road parcel is adjacent to the Chesapeake Wetland Mitigation Bank land and possesses similar conservation values.

2) The southern boundary of the 4409 Peach Road parcel borders the Dismal Swamp National Wildlife Refuge allowing it to potentially be donated for incorporation into the Refuge.

3) The property is currently for sale.

4) The purchase of the 4409 Peach Road parcel could help offset other negative impacts caused by the pipeline construction in other areas.

We feel the purchase of the 4409 Peach Road parcel represents the nearest in-kind restoration project that is readily available and in proximity to the Chesapeake Wetland Mitigation Bank and understand that Dominion Resources is currently evaluating the proposal.

Should you have any questions or if you would like to discuss these comments, please contact Dave Koubsky at 757-399-7487.

Sincerely,

Diana L Bailey

Diana Bailey
Chair
Living River Restoration Trust

COMPANIES/ORGANIZATIONS COMMENTS

CO80 – Waterkeepers Chesapeake

WATERKEEPERS® CHESAPEAKE

Post Office Box 11075
Takoma Park, MD 20913-1075
(202) 423-0504
info@waterkeeperschesapeake.org

April 6, 2017

Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Docket # CP15-554

To Whom it May Concern:

Please see Waterkeepers Chesapeake's comments below regarding Docket # CP15-554. If you have any questions, do not hesitate to contact us.

Sincerely,

Katlyn Clark
Legal Fellow
Waterkeepers Chesapeake
240-320-7711

Anacostia Riverkeeper
Assateague Coastkeeper
Baltimore Harbor Waterkeeper
Chester Riverkeeper
Choptank Riverkeeper
Gunpowder Riverkeeper

Lower James Riverkeeper
Lower Susquehanna Riverkeeper
Miles-Wye Riverkeeper
Potomac Riverkeeper
Sassafras Riverkeeper
Severn Riverkeeper

Shenandoah Riverkeeper
South Riverkeeper
Upper James Riverkeeper
Upper Potomac Riverkeeper
Virginia Eastern Shorekeeper
West Rhode Riverkeeper

WATERKEEPER® ALLIANCE MEMBER

Z-1267

COMPANIES/ORGANIZATIONS COMMENTS

CO80 – Waterkeepers Chesapeake (cont'd)

Federal Energy Regulatory Commission (FERC): Docket # CP15-554

150 people have signed a petition on Action Network telling you to Stop Fracked Gas Pipeline In VA, WV & NC!.

Here is the petition they signed:

FERC's conclusion that any impacts on the environment of the Atlantic Coast Pipeline could be mitigated so that "the majority of project effects would be reduced to less-than-significant levels" is not supported by the overwhelming evidence to the contrary.

The Draft Environmental Impact Statement (DEIS) is grossly inadequate and incomplete. The burden is on FERC to fully investigate the environmental risks and costs associated with the ACP, including all new and supplemental information. FERC has not done this.

CO80-1 1. The ACP is not needed to assure needed future energy supplies. Numerous studies have concluded there is sufficient capacity in existing pipelines. Furthermore, building new pipelines are unnecessary in the longer term because renewables (wind and solar) are the predominate source of new generating capacity being built in the nation.

CO80-2 2. The ACP would not bring jobs and economic benefits to affected communities. The people hired to construct the pipeline would not be local to VA, WV or NC, but would be contracted skilled workers from outside the area. The permanent positions created would be miniscule compared to the jobs permanently lost due to businesses that would be disrupted, particularly in the tourism industry. Further, depressed property value and reduced demand for affected real estate would adversely affect localities.

3. The ACP would devastate the environment of one of the nation's important ecosystems. It would:

CO80-3 * Threaten the integrity and safety of water supplies in the immediately affected communities and other communities that are dependent upon water originating in the Allegheny-Blue Ridge region;

CO80-4 * Endanger the structural character and seriously increase the possibility of long-term erosion in the steep mountain terrain through which the routes would pass;

CO80-5 * Present serious safety risks because of the proven instability of the karst topography that these proposed routes would traverse, as well as the danger of pipeline failures;

CO80-6 * Harm the habitat of many protected and unique species of plants and animals; Compromise the intended uses of public lands, particularly the Monongahela and George

CO80-7 Washington National Forests; and

CO80-8 * Degrade the usefulness of affected agriculture and forest resources.

CO80-1 See the response to comment CO46-1.

CO80-2 Comment noted.

CO80-3 Comment noted.

CO80-4 Comment noted.

CO80-5 Impacts related to slope stability and landslides are discussed in section 4.1.4. As described in section 4.12, ACP would be constructed and operated in accordance with the DOT's requirements for safety under 49 CFR 192.

CO80-6 Section 4.7.1 recommends that construction of the projects be conditioned upon the completion of all outstanding biological surveys and any necessary consultation with the FWS and FS.

CO80-7 See response to comment LO49-3.

CO80-8 Section 4.8.1.1 discusses the impacts on agricultural and forest land resulting from construction and operation of the project.

COMPANIES/ORGANIZATIONS COMMENTS

CO80 – Waterkeepers Chesapeake (cont'd)

20170406-5251 FERC PDF (Unofficial) 4/6/2017 12:06:46 PM

CO80-9 | 4. The ACP will deprive people of their property rights by using eminent domain for private gain.

CO80-10 | 5. The U.S. Forest Service should not approve the special use permit nor amend the national forest Land and Resource Management Plans for the George Washington and Monongahela National Forests. Amendment of the forest plans to establish a new utility corridor would exempt the project from several Forest Service standards:

CO80-11 | * Large scale excavation on high-hazard areas without detailed plans for prevention of erosion, alteration of runoff, and landslides;

CO80-12 | * Damage to water supplies and high-quality headwater streams, including native brook trout streams;

CO80-13 | * Fragmentation of high-integrity core forests that are home to many rare and sensitive species, causing loss of habitat that cannot be mitigated;

CO80-14 | * Crossing the Appalachian Trail corridor using a high-risk and environmentally damaging plan;

CO80-15 | * Degradation of scenic and recreational values in our national forests.

CO80-16 | 6. The Draft Environmental Impact Statement is incomplete and fails to meet commonsense safety guidelines and the minimum legal requirements of National Environmental Policy Act (NEPA). FERC should reject the Atlantic Coast Pipeline application.

You can view each petition signer and the comments they left you below.

Thank you,

Robin Broder

1. An anonymous signer (zip code: 15238)

2. Alexis Baden-Mayer (zip code: 22309)

3. alicia divens (zip code: 21742)

4. Amanda Dewey (zip code: 20740)

5. Amy Isaacs (zip code: 21804)

6. Amy Smeltzer (zip code: 21532)

7. Anastasia Wrioghtson (zip code: 21654)

CO80-9 See the response to comment CO50-2.

CO80-10 FS response: The opposition to the approval of the authorization and forest plan amendments by the FS is noted. See response to comment CO53-4.

CO80-11 FS response: The opposition to the approval of the authorization and forest plan amendments by the FS is noted. See response to comment CO53-4.

CO80-12 FS response: The Best in Class Steep Slope Management Program and the SAIPR provide design and construction practices for steep terrain. Atlantic would also follow the FERC Plan and West Virginia and Virginia state requirements and BMPs. The FS continues to work with Atlantic on site-specific designs which would be used to minimize the potential risks for sliding and other slope instabilities, and would require additional site designs.

CO80-13 FS response: The brook trout streams and impacts on those streams and other sensitive streams have been updated in the final EIS. See Section 4.6-Aquatics; appendix K-Waterbodies Crossed; and appendix R-Managed Species Tables. In section 4.6.5 for the GWNF, the final EIS instructs Atlantic to "request a final review and approval of the conservation measures to be incorporated for each waterbody by the appropriate federal and state agencies."

CO80-14 FS response: Fragmentation is described in Section 4.5.6-Habitat Fragmentation and Edge Effects. One action that would help reduce fragmentation effects is to create more of a transitional effect between the maintained 10-foot herbaceous cover over the pipeline toward the edge of the operational corridor with shrubs and shallow-rooted trees.

CO80-15 See response to comment CO19-01.

CO80-16 See the response to comment CO6-1.

COMPANIES/ORGANIZATIONS COMMENTS

CO80 – Waterkeepers Chesapeake (cont'd)

PLEASE reconsider this pipe line. Fracking has now been outlawed in the state of MD and for good

reason.

8. Andrew Bain (zip code: 22924)

9. Mallory Mlynarek (zip code: 20876)

This is taking a huge step back for America. Why are we putting our water and other natural

resources at risk of extreme contamination when our efforts can be put into clean energy

alternatives? Corporate bribes are the only reason I can think of why our congressmen and women

are still pushing for these polluting practices. Time to put our environment and human safety above

personal profits.

10. Alan peltzer (zip code: 21120)

11. Barbara Cunningham (zip code: 28739)

Fracking is dangerous and should be banned! Too many lives are affected by this procedure which

destroys communities, people's health, water supplies and causes earthquakes!

12. Brad Bell (zip code: 22408)

13. Bev Morgan (zip code: 19966)

Please protect our planet from the greed of fossil fuel miners. Stop the pipeline now!

14. Angela Perkins (zip code: 23320)

Please do not destroy our lands, health and wildlife for corporate greed!

15. William Reuter (zip code: 21230)

16. Shirley Ford (zip code: 21727)

17. Brian Dick (zip code: 22046)

18. Robin Broder (zip code: 22205)

19. Cameron McElroy (zip code: 99352)

We need to Stop Fracked Pipeline in Virginia, West Virginia and North Carolina!

20. Caleb Laieski (zip code: 22406)

Thank you for your time and consideration, Caleb Laieski

21. Lisa Stevens (zip code: 22015)

Save our forests! Cheap gas is not nearly as important to our future!

22. Carrie Eichelberger (zip code: 21230)

23. Chris Preperato (zip code: 22003)

24. Lucinda Snow (zip code: 20874)

25. clint marallo (zip code: 12572)

26. Joan Muzzillo (zip code: 21601)

HAVE YOU NO SHAME! Is there nothing politicians and business won't do for profit, power and fame

at the expense of we citizens and our environment who bear the nasty results of your madness?!

STOP - NO 600 mile fracked gas ACP!

27. Carol Smith (zip code: 21532)

28. Colin deLeyer (zip code: 21047)

29. Daphne Byron (zip code: 20906)

Please ensure that a complete and thorough Draft Environmental Impact Statement is made in order

to explore all the environmental risks and costs associated with the Atlantic Coast Pipeline before

making a decision to proceed.

30. Dorothea Newport (zip code: 21042)

Support more renewable energy sources, not environmentally damaging fossil fuels.

31. Donna Feirtag (zip code: 22205)

32. Kevin Hurleu (zip code: 21403)

33. Dudley Lindsley (zip code: 20650)

34. Donald Howard (zip code: 20724)

FERC: Harnessing solar energy is increasing rapidly. We do NOT need more gas pipelines. Heed the

local opposition and reject the ACP pipeline!

35. Richard McDonough (zip code: 22851)

36. m drucker (zip code: 22032)

37. doug meikle (zip code: 20120)

38. Evan Isaacson (zip code: 21403)

Not only has there not been sufficient analysis of whether the pipeline will be needed but more

importantly there is scant attention paid to the inconsistency of the pipeline with the goals of the

Clean Water Act. It would significantly hinder compliance with the Bay TMDL targets at a time when

everyone is spending billions to try to meet the Bay restoration goals on time. This pipeline is a

horrible idea.

39. Erin May (zip code: 22204)

40. Cynthia Erville (zip code: 20901)

41. ELLEN ZIMMERMAN (zip code: 22602-6935)

Imagine that YOUR children and grandchildren have been drinking tainted water for a few years - and

no one knew what havoc this was wreaking in their little bodies. How can you pretend that the

consequences of approving this pipeline won't affect REAL PEOPLE. How can you stand by and let

the almighty dollar hurt the region economically and environmentally? How is it possible that science

and fact are being overlooked so rampantly in this administration? How do you explain the

phenomenal increase in earthquakes in Oklahoma? Where have common sense and compassion

gone?

42. Franklin Shap (zip code: 21550)

I am opposed to the pipeline, and its potential environmental impact.

43. Frelenda Dacquisto (zip code: 20650)

44. Zoe Friedman (zip code: 21213)

45. Raymond Frizzell (zip code: 15206)

Put the rubber stamp away!

46. will guthrie (zip code: 22205)

47. Geraldine Rosen (zip code: 20714)

Please stop fracked gas pipeline in VA , WV and NC.

Environmental impacts must be considered!

48. Andrew Heer (zip code: 21054)

49. Stephanie Felton (zip code: 21716)

50. Gail Criger (zip code: 22630)

51. judi decker (zip code: 20715)

Fracking leads to poison water and earthquakes. Not worth the trade offs.

52. Hedda Haning (zip code: 25302)

53. Henri Bowman (zip code: 24401)

We do not need this pipeline. Please do your job and access the environmental impacts building this

pipeline will have on our land.

54. Heidi Pringle (zip code: 21042)

55. Stephanie Joyner (zip code: 21228)

56. Hank Stone (zip code: 14475)

57. David Hurley (zip code: 21015)

58. S Long (zip code: 21046)

I am against this pipeline near it thru rivers/parks. Thank you.

59. Michael Kahn (zip code: 19320)

60. yvonne Irvin (zip code: 20640)

61. Jason Woodby (zip code: 23836)

It is dangerous to build pipelines in karst topography

62. Jean Cushman (zip code: 21286-5427)

63. Jean Pitaro (zip code: 90069)

64. Julie Giessler (zip code: 14469-9514)

Check out Dimock, Pa, and what happened to their drinking water!!! This is just one community. NY

State, under Governor Cuomo banned fracking! WHY? The consequences of hydrofracking

devastated and destroyed this town. There is plenty of evidence to DENY fracking since it is harmful

to environments! THINK TWICE BEFORE YOU ENACT THE APC PIPELINE!

65. John Neumeister (zip code: 10032)

66. Joy Kroeger-Mappes (zip code: 21532)

67. Joan Clement (zip code: 21053)

68. Roger Gilpin (zip code: 21522)

69. John Roach (zip code: 21214)

70. John McPeek (zip code: 22031)

And we were just starting to get somewhere in the Chesapeake! Our grade is finally up to D+!

71. James Strick (zip code: 20901)

The environmental and public health risks of this project outweigh the potential gains.

James Strick, Professor

Dept. of Earth and Environment

Franklin and Marshall College

Lancaster, PA 17604-3003

72. JT Merryman (zip code: 21228)

We have alternatives to fossil fuels. There are no alternatives to clean water.

73. Judith Burch (zip code: 22903)

74. Judy Bryan (zip code: 22306)

75. Karen Fedorov (zip code: 22712-7844)

Keep it in the ground! Promote truly clean energy!

76. Kelly Catlett (zip code: 21037)

77. Avis Ogilvy (zip code: 70118-4057)

78. Leslie Back (zip code: 22301)

79. Louise Wallace (zip code: 22031)

No pipeline carrying anything toxic should be anywhere near water of any kind.

80. Carolyn Armstrong (zip code: 21617)

I am totally against fracking. Please do not ruin the forests left to the public to enjoy. These are critical

environmental areas.

81. Lois Hybl (zip code: 21218)

82. Elizabeth Heneghan (zip code: 19707)

The Chesapeake Bay and watershed area should be considered natural treasures. Is there not

another solution to fracking, rather than threatening this delicate environment which is already in a

precarious state?

83. Linda Woods (zip code: 21601)

84. lois lommel (zip code: 23235)

85. Lucie Geinzer (zip code: 21738)

86. Lynne Lee (zip code: 22485)

87. Lynn Maher (zip code: 21701)

Vote No to ACP.

88. David Lyon (zip code: 07601)

89. Daryl Manuel (zip code: 20657)

Stop poisoning our planet

90. Martin Abramo (zip code: 22602)

91. maya gorina (zip code: 20895)

92. Mark Zimmerman (zip code: 22602)

93. Megan Cooley-Klein (zip code: 20874)

FERC should fully investigate the environmental risks and costs associated with the Atlantic Coast

Pipeline.

94. Marcia Fairman (zip code: 22520)

95. Martha Keeley (zip code: 22620)

96. MICHAEL LEICHT (zip code: 21225)

97. Michael Lombardi (zip code: 19054-2023)

1. The ACP is not needed to assure needed future energy supplies. Numerous studies have concluded there is sufficient capacity in existing pipelines. Furthermore, building new pipelines are unnecessary in the longer term because renewables (wind and solar) are the predominate source of new generating capacity being built in the nation.

2. The ACP would not bring jobs and economic benefits to affected communities. The people hired to construct the pipeline would not be local to VA, WV or NC, but would be contracted skilled workers from outside the area. The permanent positions created would be miniscule compared to the jobs permanently lost due to businesses that would be disrupted, particularly in the tourism industry. Further, depressed property value and reduced demand for affected real estate would adversely affect localities.

3. The ACP would devastate the environment of one of the nation's important ecosystems. It would:

Threaten the integrity and safety of water supplies in the immediately affected communities and other communities that are dependent upon water originating in the Allegheny-Blue Ridge region;

Endanger the structural character and seriously increase the possibility of long-term erosion in the steep mountain terrain through which the routes would pass;

Present serious safety risks because of the proven instability of the karst topography that these

proposed routes would traverse, as well as the danger of pipeline failures;

Harm the habitat of many protected and unique species of plants and animals;

Compromise the intended uses of public lands, particularly the Monongahela and George

Washington National Forests; and

Degrade the usefulness of affected agriculture and forest resources.

4. The ACP will deprive people of their property rights by using eminent domain for private gain.

5. The U.S. Forest Service should not approve the special use permit nor amend the national forest

Land and Resource Management Plans for the George Washington and Monongahela National

Forests. Amendment of the forest plans to establish a new utility corridor would exempt the project

from several Forest Service standards:

Large scale excavation on high-hazard areas without detailed plans for prevention of erosion,

alteration of runoff, and landslides;

Damage to water supplies and high-quality headwater streams, including native brook trout streams;

Fragmentation of high-integrity core forests that are home to many rare and sensitive species,

causing loss of habitat that cannot be mitigated;

Crossing the Appalachian Trail corridor using a high-risk and environmentally damaging plan;

Degradation of scenic and recreational values in our national forests.

6. The Draft Environmental Impact Statement is incomplete and fails to meet commonsense safety

guidelines and the minimum legal requirements of National Environmental Policy Act (NEPA). FERC

should reject the Atlantic Coast Pipeline application.

98. Molly Jean Kirkup Heer (zip code: 21409)

99. Michael Klump (zip code: 23005)

100. Matthew Reid (zip code: 22611)

Please do not allow this pipeline to pollute our great state of va

101. Joanne Christofel (zip code: 21403)

102. Nancy Plaxico (zip code: 21403)

103. Todd Lipcsey (zip code: 22193)

104. Ned Stone (zip code: 22308)

105. Edward Newcomen (zip code: 21620)

Most rural Marylanders have their own well water - fracking is a serious danger to these people's

health - stop the fracking and stop the poisoning of well water

106. Nicki Sikler (zip code: 18301)

Pipes leak, whether oil or gas pipelines. Do not risk our water, land and air.

107. oza Bell (zip code: 22454)

Please do NOT use fracking in my state of Virginia!

108. Lori Parks-Murphy (zip code: 21742)

109. Christine Payden-Travers (zip code: 24503)

110. mark perreault (zip code: 23508)

111. Jeffry Iliff (zip code: 25411)

Please do not risk our environment with more dangerous pipelines.

112. Laura Livesay (zip code: 24086)

113. Thomas Fisher (zip code: 31620)

COMPANIES/ORGANIZATIONS COMMENTS

CO80 – Waterkeepers Chesapeake (cont'd)

114. Randy Murbach (zip code: 210425325)

115. Alan Harper (zip code: 23225)

116. An anonymous signer (zip code: 21620)

117. Robin Broder (zip code: 21037)

118. Christopher Rossi (zip code: 20832)

119. Robin Broder (zip code: 22205)

120. Robert Shippee (zip code: 23233)

121. Ruth Carlson (zip code: 21028)

122. Hugh Mealy (zip code: 21401)

123. Alex Bryan (zip code: 98368)

124. Sheila Sawyer (zip code: 21921)

125. Lorenz Steininger (zip code: 86558)

126. An anonymous signer (zip code: 20016)

127. Sharon Reuter (zip code: 21230)

128. Rebecca Jeffery (zip code: 21663)

NO FRACKING!! Living in Colorado in 1960's. Had earthquakes because the Rocky Mountain

Arsenal was pumping waste into the ground. When they stopped, the quakes stopped.

129. Annette Fay (zip code: 22209)

130. Sophia Marx (zip code: 21037)

This is an unnecessary project. This is not for building a greater America. A great America is one that

uses renewable energy. Stop with the fracking and the pipelines. They are detrimental to our physical

health. They are detrimental to our environmental health.

131. Sondra Novo (zip code: 21084)

132. Susanne Groenendaal (zip code: 16801)

133. Mitchelle Stephenson (zip code: 21037)

134. Randy and Lydia Stettler (zip code: 18343)

We are against fracking. We want clean wind & solar energy and jobs. NO FRACKING ON STATE OR

FEDERAL FOREST LANDS!!!!!

135. Thomas Wasmund (zip code: 22485-4763)

We DO NOT WANT OR NEED another fracked gas pipeline

136. Shane Worth (zip code: 20011)

137. Richard Owens (zip code: 23146)

The fracked gas pipeline is not in citizens best interests.

138. Tracey Katsouros (zip code: 20601)

139. Theresa Waldspurger (zip code: 28607)

140. Barbara Quist (zip code: 20876)

141. Cary Moy (zip code: 60302)

142. Vicki Carlson (zip code: 21550)

143. Vonda Vandaveer (zip code: 22314)

144. Rose Levering (zip code: 32176)

Please do not go through with the ACP. My husband and I were born and raised in Virginia and Maryland, respectively. Friends and family are still there. But, fracking is a bad idea pretty much wherever it may occur.

Rose Levering

145. wendy perry (zip code: 21620)

COMPANIES/ORGANIZATIONS COMMENTS

CO80 – Waterkeepers Chesapeake (cont'd)

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A full and complete Environmental Impact study must be done! We don't even need another pipeline,

existing pipelines are sufficient, and the emphasis must be put on renewable energy. Not enough is

known about the permanent damaging effects of fracking.

146. patricia winkelmayer (zip code: 21811)

147. Winnie Carpenter (zip code: 21043)

148. An anonymous signer (zip code: 20747)

Z-1282

COMPANIES/ORGANIZATIONS COMMENTS

CO81 – Appalachian Voices

AppalachianVoices

AppalachianVoices.org
outreach@appvoices.org

BOONE
589 West King Street
Boone, NC 28607
828.262.1500

CHARLOTTESVILLE
812 East High Street
Charlottesville, VA 22902
434.293.6373

KNOXVILLE
2507 Mineral Springs Ave.
Suite D
Knoxville, TN 37917
865.291.0083 ext. 700

NORTON
816 Park Avenue NW
Norton, VA 24273
276.679.1691

April 6, 2017

Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

RE: Docket Nos. CP15-554-000, CP15-554-001, CP15-555-000, CP15-556

Comments on the Atlantic Coast Pipeline and Supply Header Project DEIS

Dear Deputy Secretary Davis:

Appalachian Voices and 3,253 supporters, whose names are attached below, respectfully submit the following comments on the Draft Environmental Impact Statement for the proposed Atlantic Coast Pipeline and Supply Header Project:

The proposed Atlantic Coast Pipeline (ACP) is not in the public interest. It poses very real threats to public health and safety across West Virginia, Virginia, and North Carolina. Not only will it create permanent adverse impacts on the local environment, it will also contribute to several more decades of global climate pollution.

Studies show that existing gas infrastructure is more than sufficient to meet regional energy needs for residents and industry. Therefore, the primary beneficiaries of the pipeline will be private companies. This is deeply concerning, given that a Certificate of Public Convenience and Necessity would allow the taking of private property for this project.

The Draft Environmental Impact Statement (DEIS) issued by the Federal Energy Regulatory Commission (FERC) fails to provide adequate information for public comment and fully account for all of the environmental threats posed by the ACP. Among them:

1. Forests and Habitat. The project will adversely impact 6,800 acres of pristine forest, with 3,800 acres damaged *permanently*. It would fragment habitat for listed species and disrupt views from the Blue Ridge Parkway and Appalachian Trail. The Applicants request an amendment to the George Washington National Forest plan that would convert 104 acres to a "utility corridor." Yet the Applicants have not provided the U.S. Forest

CO81-1

CO81-1 FS response: The FS no longer proposes a conversion of acres to the Rx5C-Designated Utility Corridors (Section 4.8.9-Federal Lands). Since the draft EIS, Atlantic has provided additional inventories and analyses as requested by the FS to evaluate the effects of the proposed project; additional project design features, mitigation measures, and monitoring procedures have been incorporated.

CO81-1 (cont'd) Service with requested surveys. The EIS process cannot move forward until consultation with the U.S. Forest Service is complete.

CO81-2 **2. Surface Water and Wetlands.** The ACP would cross 1,989 streams or rivers and affect 786 acres of wetlands, yet several crossing plans and mitigation plans are missing or incomplete. It is impossible to conclude that impacts will not be significant without this information.

CO81-3 **3. Climate Change.** The DEIS does not analyze the greenhouse gas life cycle of a project that enables 1.5 Bcf/day of a potent greenhouse gas (GHG) to be shipped and burned. While the DEIS does provide a rough calculation of GHG emissions resulting from end-use, it does not analyze upstream or fugitive emissions in a meaningful way.

CO81-4 **4. Air Pollution.** Operation of the ACP would produce emissions of nitrogen oxides, carbon monoxide, particulate matter, sulfur dioxide, volatile organic compounds, GHGs, and hazardous air pollutants, and each of the three new compressor stations would require a federal permit as major source emitters. Yet the DEIS refuses to take seriously system alternatives, including existing pipelines and emission-free sources of electricity generation, despite a stated purpose that roughly 80% of the gas proposed to be shipped is intended for electricity generation.

CO81-5 **5. Safety.** Federal data and independent studies show that natural gas pipeline leaks and explosions occur regularly, and these accidents have increased in frequency in recent years. (http://ieefa.org/wp-content/uploads/2016/05/Risks-Associated-With-Natural-Gas-Pipeline-Expansion-in-Appalachia-_April-2016.2.pdf) The DEIS states that the Applicants would comply with federal construction and operation standards and that emergency contact information for local fire, police, and public officials would be provided. This is cold comfort to people living near the route, especially in cases where communities are serviced by a single road.

CO81-6 **6. Environmental Justice.** The DEIS states that more than half of the census tracts within 1 mile of the proposed route have poverty rates above their respective statewide averages (WV, VA, NC). Therefore, its conclusion that "there is no evidence that ACP...would cause a disproportionate share of high and adverse environmental or socioeconomic impacts on any...socioeconomic group" is specious. DEIS at 4-413.

CO81-7 **7. Karst Terrain and Groundwater**. The pipeline would cross between 32.5 and 71.3 miles of karst terrain, characterized by sinkholes, caverns, underground streams, and springs. Sediment can contaminate groundwater due to construction on this steep and unstable terrain. If the pipeline leaks, petrochemicals associated with the pipeline (like fuels and lubricants) could enter karst systems and reemerge miles away from the point of entry. The DEIS states that surveys of private drinking wells are incomplete. Even if surveys are completed, investigative methods like dye tracing are better at risk

CO81-2 We disagree.

CO81-3 See the response to comment CO55-2.

CO81-4 See section 3.

CO81-5 Comment noted. See also the response to comment CO48-11.

CO81-6 See the response to comment CO65-3.

CO81-7 Comment noted.

CO81-7 (cont'd)

identification than simply monitoring wells. FERC cannot conclude that threats to groundwater would be minimized without securing and analyzing this information.

We appreciate the opportunity to provide comments on this project, which stands to have enormous impacts on the Appalachian region. For the reasons outlined above, we urge you to reject the Atlantic Coast Pipeline's application. The project is not necessary, nor is it in the public interest.

Sincerely,

Tom Cormons, J.D.
Executive Director

The attachments to this letter have been reviewed by FERC staff and can be found on the FERC eLibrary site under FERC Accession No. 20170406-5257.

COMPANIES/ORGANIZATIONS COMMENTS

CO82 – Trout Unlimited

April 6, 2017

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

RE: Trout Unlimited comments regarding Draft Environmental Impact Statement on the Atlantic Coast Pipeline and Supply Header Project (FERC Docket Nos. CP15-554-000, CP15-554-001, and CP15-555-000)

Secretary Bose:

On behalf of Trout Unlimited and the West Virginia and Virginia councils of Trout Unlimited ("Trout Unlimited"), we offer these comments regarding the draft Environmental Impact Statement on the Atlantic Coast Pipeline and Supply Header Project, issued by the Federal Energy Regulatory Commission on December 30, 2016.

Trout Unlimited, representing 150,000 anglers nationally and more than 6,000 in West Virginia and Virginia, works to conserve, protect, and restore North America's trout and salmon habitat, with a goal of rebuilding naturally sustainable fisheries. We protect high-quality headwater spawning habitat, reconnect tributaries with healthy rivers downstream, and restore stretches damaged by development so that they can once again harbor thriving trout and salmon populations. Ours is a comprehensive, science-based approach that involves identifying the most promising opportunities to conserve important coldwater resources.

TU supports responsible energy development that meets the needs of the public while eliminating, minimizing, or mitigating impacts on coldwater fisheries. Since the Atlantic Coast Pipeline project was announced in 2014, TU staffers and our West Virginia and Virginia councils have worked to see that concrete steps be taken to avoid or limit impacts on native and wild trout populations in the path of construction. We appreciate the opportunities we've had to voice our concerns, and we look forward to continuing, productive conversations.

Conserving, protecting, and restoring North America's coldwater fisheries
(856) 834-6591 | email: dkinney@tu.org | http://www.tu.org

These comments will focus on the potential effects of the ACP on a number of West Virginia and Virginia trout streams, and recommend measures to minimize these impacts.

As the Commission notes in this draft EIS, construction of the pipeline could have a significant impact on streams, wetlands and the fisheries they support in an area of the Appalachians that is home to robust, intact populations of native brook and wild trout. We are especially concerned about severe erosion and sedimentation impacts that could result from building a pipeline on steep terrain in the mountains of West Virginia and Virginia. In-stream work, clearing of vegetation, regrading, and soil compaction near streams increase the potential for sedimentation from stormwater runoff. Sedimentation can reduce levels of dissolved oxygen, smother prime trout spawning habitat with silt, and hamper fish egg development. High turbidity can cloud the water, and cause stress and reduced feeding in trout. Stream crossing construction can damage riparian habitat, strip away protective buffers, destabilize streambanks, and alter streambeds. In addition, water withdrawals and discharges can harm aquatic species by reducing stream flows or degrading water quality.

Given this list of potential harms, we ask the Commission to pay special attention to the effects of the Applicant's proposal on coldwater resources.

High Concern Trout Habitat

CO82-1

The eastern brook trout is native to the region, and the streams in the Appalachians are strongholds for a species whose range has been steadily diminished by a century of development. The brook trout is also a sensitive fish, requiring the cleanest and coolest water to thrive. Intact canopies are an essential component of healthy habitat for these fish.

TU scientists have studied the trout habitat that would be crossed by the proposed project, relying on our recently completed Conservation Portfolio Analysis of brook trout populations. Researchers identified stronghold populations ("resilient"), sizable populations that are well-suited to survive environmental changes ("redundant"), and populations that are geographically unique or have distinctive life histories ("representative"). The research was grounded in the idea that, just as a diversified stock portfolio is a hedge against financial risk, an array of biologically diverse, intact brook trout communities spread across a variety of habitats is the key to a stable species. To help TU develop strategic priorities for areas to conserve, protect, and restore, researchers assessed habitat stability and potential threats in each of these resilient, redundant, and representative patches.

By our count, streams harboring brook, brown, and rainbow trout in West Virginia and Virginia would be crossed 248 times by the Atlantic Coast Pipeline or by the access roads that would be used to construct and operate it.

CO82-1 The number of trout crossings has been revised in section 4.6 and appendix K based on the updated route and updated survey information. It is also important to note that 80 percent of the access roads that are proposed for use by ACP are existing roads. Atlantic has committed to implementing applicable FS and state mitigation measures at trout waterbody crossings to reduce potential impacts on this species and its habitat, including adhering to FS and VDGIF TOYR. Atlantic has also committed to no longer withdrawing water from the Big Spring Fork in West Virginia. Additional mitigation measures that would be implemented to protect aquatic resources are described in section 4.6.4; mitigation measures unique to NFS lands and waterbody crossings are described in section 4.6.5. We have made additional waterbody-specific recommendations in appendix K. Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, to the extent the state has regulatory authority and permitting jurisdiction for these features, Atlantic would consult with the WVDNR and VDGIF. The WVDNR and VDGIF would have the opportunity to review Atlantic's proposed crossings during the permitting process and, if necessary, identify additional mitigation measures beyond those proposed.

CO82-1 (cont'd)

Our analysis has identified at least 138 high-concern crossings in patches of land with "resilient," stronghold brook trout populations or sizable "redundant populations." Of these, 69 are crossings by the pipeline right-of-way—28 involve perennial streams, while 41 involve intermittent streams and tributaries. The other stream crossings in these patches are by existing or proposed new access roads.

These high-concern crossings are in Upshur, Randolph, and Pocahontas counties in West Virginia, and Highland, Bath, and Augusta counties in Virginia. The affected watersheds include the Middle Fork River, Buckhannon River, Upper Elk River, Knapp Creek, Back Creek, Middle Jackson River, Upper Jackson River, Middle Cowpasture River, Calfpasture River, and South River.

Outside these "resilient" and "redundant" patches, building the ACP would require another 110 wild trout streams crossings in these six counties; 26 of these are also perennial waters.

West Virginia

In Randolph County, the ACP would cross high-value perennial trout water like Phillips Camp Run, Beech Run, and Long Run—all of which are in a stronghold brook trout patch. Valley Fork, a 50-foot wide stream with runs, deep pools, and riffles, is in the path of the pipeline, as are its nearby tributaries. A quarter of a mile away, what appears to be a new access road makes a number of crossings of a Valley Fork tributary as it runs up a slope.

In Pocahontas County, perennial trout streams like Big Spring Fork and Clover Creek would be crossed. Big Spring Fork is a headwater of the Elk River system, where wild populations of brook, brown, and rainbow trout support a thriving sport fishing economy. As West Virginia officials have pointed out, this particular stream already faces multiple stressors, including home development, new roads, and farms. (Draft EIS, p. 4-176).

Virginia

In Highland County, just outside the boundaries of the George Washington National Forest, the pipeline would cross Jackson River and nearby perennial and intermittent tributaries seven times over the course of two miles.

In Bath and Augusta counties, where the project runs through a sliver of land between parcels of land held by the Forest Service, the construction corridor would cross Mill Creek, Hamilton Branch, Calfpasture River, and their tributaries—among them Tizzle Branch, Hodges Draft, Ramseys Draft—42 times over a span of 13 miles.

The impact would be much the same further east in Augusta County, where the line would cross Orebank Creek and Back Creek and their tributaries 14 times.

COMPANIES/ORGANIZATIONS COMMENTS

CO82 – Trout Unlimited (cont'd)

Forest Service Mitigation Measures

Some of these high-concern streams run through sections of the Monongahela and George Washington National Forests. We are encouraged that the Applicant is working with the Forest Service on a *Construction, Operations, and Maintenance Plan* ("COM Plan") for the portion of the project that crosses public lands. These plans include enhanced best management practices that go beyond FERC's *Upland Erosion Control, Revegetation, and Maintenance Plan* and *Wetland and Waterbody Construction and Mitigation Procedures*, and state erosion and sedimentation guidelines.

Among these "additional mitigation measures" for Forest Service lands are requirements that:

(1) stream channels be restored to their near-natural morphology;
(2) additional temporary work spaces be located at least 100 feet from the edge of a perennial stream;
(3) minimum buffers of 100 feet be protected where pipeline construction parallels a stream, increasing with the gradient of the slope;
(4) additional erosion controls be in place when construction work is within 100 feet of a trout stream during time-of-year restrictions;
(5) hydrostatic testing water not be withdrawn from National Forest waters;
(6) new or reconstructed road-stream crossings allow for fish and aquatic organism passage.

CO82-2 Trout Unlimited welcomes these steps that would help protect trout habitat from damage, but we strongly believe that these best management practices should also apply to high-quality trout waters that are not on land held by the Forest Service. In numerous cases, the ACP passes just outside the boundaries of these forests, and it is in these stretches that construction would have the most substantial potential impact on coldwater resources. It makes little sense for one set of construction standards to apply to the trout streams in the National Forests, and another set on private lands.

Given the fragmented nature of the land held by the National Forests and the interconnectedness of these watersheds, we strongly recommend that the Commission require the Applicant to apply a standard set of conditions to these high-value waters before granting permission to the project.

CO82-2 The FS is the lead federal agency responsible for issuing special use permits for activities across federal lands under the jurisdiction of the FS pursuant to the Mineral Leasing Act of 1920 and in accordance with federal regulations in 43 CFR 2880. As such, Atlantic is required to obtain a SUP from the FS for its project. FS land management planning requirements are established by the NFMA and regulations at 36 CFR 219. These laws and regulations require a forest-specific, multi-year LRMP. As such, the FS has a regulatory responsibility to manage NFS lands in accordance with forest-specific LRMPs. Further, it has the authority to require an applicant to comply with measures it determines necessary to reduce impacts on environmental resources on lands under its jurisdiction.

The FERC is not a land-managing agency. Atlantic and DETI would adopt the general construction, restoration, and operational mitigation measures outlined in the FERC Plan and Procedures, which are a set of construction and mitigation measures that were developed in collaboration with other federal and state agencies and the natural gas pipeline industry to minimize the potential environmental impacts of the construction of pipeline projects in general. In addition, Atlantic and DETI have identified additional measures they would implement during construction to reduce impacts; we reviewed these measures in the EIS, concluded if they would be effective, and recommended additional measures where appropriate.

As discussed in section 4.8.2, Atlantic and DETI would negotiate easement agreements with private landowners affected by ACP and SHP. An easement agreement between a company and a private landowner typically specifies compensation for losses resulting from construction, including losses of non-renewable and other resources, damages to property during construction, and restrictions on existing uses that would not be permitted on the permanent right-of-way after construction. Landowners have the opportunity to request that site-specific factors and/or development plans for their property be considered during easement negotiations, and that specific measures be taken into account.

COMPANIES/ORGANIZATIONS COMMENTS

CO82 – Trout Unlimited (cont'd)

TU Recommendations

(1) Stream crossings

TU recommends that the Commission request and review site-specific stream crossing, reconstruction, and monitoring plans for the proposed crossings of perennial trout waters by the pipeline right-of-way, especially the 28 high-concern crossings in resilient and redundant brook trout habitat.

CO82-3 *Site-Specific Construction Plans*: The Applicant should produce site-specific plans for each of these proposed crossings. Before issuing an EIS, the Commission should study these plans to ensure the suitability of the crossings, and release them so the public can do the same. At a minimum, these plans would describe what type of open-cut dry-ditch method would be used at which locations; demonstrate that the alignment of the crossing is at a right angle to the channel; and identify the location of temporary bridges, water discharge stations, pumps, and temporary work spaces.

The Commission should also request that the Applicant produce an analysis of peak flows at these crossings, and ensure that it has taken steps to prepare for them.

The Applicant has surveyed each of the waterbodies proposed to be crossed by the pipeline for physical and qualitative attributes, but certain information is still lacking. The company proposes to bury the pipeline a minimum of four feet at waterbody crossings, except where there is consolidated bedrock, in which case the pipe would be buried a minimum of two feet. It is unclear whether the Applicant has conducted hydrologic analyses of the potential for channel degradation and scour during peak flooding events to determine whether this is deep enough in all cases to prevent the pipe from being exposed. The Commission should see that these studies are done.

CO82-4 *Restoration Plans*: We recommend the Commission seek site-specific restoration plans for these crossings to ensure that the Applicant has a plan for returning each stream to its pre-construction hydrology. In its planning for stream crossings, the company should study and account for each stream's channel stability, scour depth, gradient, pool depth, and other unique characteristics. Without this information, the Applicant cannot ensure that it has restored each stream channel to its pre-construction condition.

After completion of construction, stream morphology should be unchanged. The stream bed should have the same contours and slope, the width and depth of the channel should be unchanged, and the stream bottom should be reconstructed using native materials similar to those upstream and downstream. The trench should be filled with two feet of native substrate, not just one, to further limit scour. Pools and riffles should be recreated. Cobbles should be used in place of riprap.

CO82-3 Crossing methods, workspace requirements, and waterbody survey information have been provided for waterbody crossings. Although site-specific plans have not been provided for all major waterbody crossings, existing design and resource information is sufficient for FERC to assess each crossing. We do not believe a scour analysis is required for this project.

CO82-4 We do not need site-specific restoration plans. The commitments and permit requirements that Atlantic and DETI must implement apply to all streams, and inspectors and monitors (as well as FERC staff) will ensure restoration is completed as required.

CO82-4 (cont'd) We are pleased that the Applicant has agreed to restore streams to "near natural morphology" when working on Forest Service lands (COM Plan, p. 122); it should apply the same standard to the high-concern trout waters outside the boundaries of the National Forests. This is important not just for the larger, perennial streams crossed by the pipeline, but also for the smaller, intermittent tributaries that are part of the same network. Even if these streams are dry part of the year, they often serve as nurseries and spawning grounds for naturally reproducing trout in connected waterways.

We appreciate that the Applicant has agreed that large woody materials removed from the stream and the riparian area during construction be replaced to add shade and habitat, and that fast-growing native trees be planted near the waterways to encourage a speedy recovery of stream canopy. (Draft EIS, p. 2-37).

CO82-5 *Monitoring Plans*: We recommend that the Commission seek post-construction monitoring plans that would help detect any long-term impacts on these trout streams. On Forest Service lands, the Applicant has collected data on water chemistry, stream discharge, and benthic macroinvertebrates for streams within the George Washington National Forest. (Draft EIS, p. 4-197). This data should also be collected for high-priority trout streams outside Forest Service lands in order to provide baseline water-quality data. The Applicant has also committed to turbidity monitoring during construction, and for four days following restoration activities. (COM Plan, p. 194). The same monitoring should be in place on the perennial trout streams we have identified.

(2) 100-foot setbacks for additional temporary work spaces

CO82-6 We strongly recommend the Commission require that additional temporary work spaces be set back at least 100 feet from perennial trout waters. This would match the setbacks the Applicant has agreed to provide for perennial waters within the National Forests (COM Plan, p. 127). These setbacks should increase when crews are working in areas of greater slope.

(3) 100-foot setbacks when construction parallels high-concern trout streams

CO82-7 The Applicant has proposed a 15-foot buffer of undisturbed vegetation in those areas where the pipeline right-of-way runs parallel to a waterbody. This narrow a stream buffer is not protective of water quality and aquatic life. We recommend that the Commission require 100-foot buffers between the pipeline and affected perennial trout streams, with larger buffers on steep slopes. Again, this would be in keeping with what the Applicant has agreed to do within the National Forests (COM Plan, p. 127).

CO82-5 Monitoring plans are in place, and additional monitoring plans will be filed, reviewed, and approved prior to construction.

CO82-6 We do not agree. This increased distance would likely cause additional rutting and soil loss and increase the duration of completing waterbody crossings.

CO82-7 Comment noted.

COMPANIES/ORGANIZATIONS COMMENTS

CO82 – Trout Unlimited (cont'd)

(4) Erosion & sedimentation controls

CO82-8 *Sensitive waterbodies*: In correspondence with the U.S. Forest Service and the Fish and Wildlife Service, the Applicant has stated that "additional erosion and sedimentation control measures will be used around sensitive waterbodies" within the National Forests. These techniques should be described, and applied to the perennial trout streams we have identified, as well as the flowing intermittent trout streams in resilient and redundant patches.

CO82-9 *Time-of-Year Restrictions*: Brook trout spawn in the fall, usually from early October to mid-November; hatchlings emerge in January. The Applicant has stated that it will not construct crossings on trout streams between September 15 and March 31 in West Virginia, nor between October 1 and March 31 in Virginia, as required by state regulations. We recommend that the Commission extend these seasonal restrictions to include work on the stretches of the pipeline that run parallel to these streams, as research shows that disturbances during spawning season can have a detrimental effect on trout reproduction.

The Applicant reports that it may request waivers of this restriction. TU opposes waivers for work in the perennial and flowing intermittent trout streams at issue. At the very least, the Applicant should detail what additional measures it would take if it receives a TOYR waiver. TU recommends that the Commission require the Applicant to set back additional temporary work spaces 100 feet from perennial and flowing intermittent streams; use enhanced erosion and sedimentation controls around these waters, such as compost filter socks or heavy-duty Belted Silt Retention Fences, especially where construction occurs on slopes; and limit in-stream blasting, as it has agreed to do around trout streams in West Virginia. This would be in keeping with construction practices planned for National Forest lands, where the Applicant has agreed to use additional erosion control measures when conducting any sediment-producing construction activities within 100 feet of a perennial trout stream during the TOYR period. (Draft EIS, p. 1-114).

(5) Test water withdrawals and discharges

CO82-10 The Applicant proposed to withdraw from and discharge into Big Spring Fork (MP 69.2), Jackson River (MP 91.5), and Calfpasture River (MP 111.4) a total of 7.7 million gallons of hydrostatic testing water. Each of these are high-concern brook trout streams. As noted above, Jackson and Calfpasture rivers are in stronghold brook trout habitat patches. Given the sensitivity of these waters, we strongly recommend that the Commission not permit these withdrawals and discharges, and the Applicant should locate alternative sources for hydrostatic testing water. This, too, would match restrictions the Applicant has agreed to follow within the National Forests (COM Plan, p. 137).

CO82-8 Comment noted. Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, to the extent the state has regulatory authority and permitting jurisdiction for these features, Atlantic would consult with the WVDNR and VDGIF. The WVDNR and VDGIF would have the opportunity to review Atlantic's proposed crossings during the permitting process and, if necessary, identify additional mitigation measures beyond those proposed.

CO82-9 Atlantic is required to obtain the necessary permits and authorizations required to construct and operate the project. As such, to the extent the state has regulatory authority and permitting jurisdiction for these features, Atlantic would consult with the WVDNR and VDGIF. The WVDNR and VDGIF would have the opportunity to review Atlantic's proposed crossings during the permitting process and, if necessary, identify additional mitigation measures beyond those proposed. It would be the discretion of these agencies whether to grant waivers for trout TOYR.

CO82-10 Big Spring Fork would no longer be used as a water source, and Atlantic has committed to adhere to VDGIF TOYR for Jackson River and Calfpasture River, which would include water withdrawals. Atlantic is required to obtain the necessary permits and authorizations required for water withdrawal and discharge from the applicable state agency.

CO82-10 (cont'd) If such discharges are allowed in these waters, however, the Commission should not permit the practice from September 15 through March 31 to protect spawning trout, and the Applicant should use dewatering structures and filtration barriers to ensure that discharges do not cause undue sedimentation, turbidity, and rapid water temperature changes.

(6) Access roads and aquatic organism passage

The Applicant proposes to expand 387 existing access roads, construct 66 new ones, and add new sections to another 19 roads (Draft EIS, p. 2-25).

CO82-11 *Aquatic Organism Passage*: The draft EIS does not address aquatic organism passage (AOP). Many road stream crossings built over the years were installed without consideration for stream hydrology and fish passage. On stretches of water with impassible substandard culverts, trout may not be able to escape high water temperatures or reach spawning habitat. Replacing poorly designed culverts with improved road stream crossings provides for interconnected habitat and enhanced flood resiliency. Trout Unlimited strongly recommends that the Applicant incorporate current assessment, design, and construction tools into its planning for access road construction and improvement. We recommend that the Commission require any new or reconstructed culverts be designed to span at least 120 percent of bankfull width and feature streambeds that match upstream and downstream stretches, as described in the Forest Service's Stream Simulation Design procedures. We note again the Applicant has agreed to do so on National Forest lands (COM Plan, p. 128).

We thank the Commission for taking these remarks into consideration, and respectfully request that before issuing a final EIS, it seek additional protections to ensure that construction would not degrade water quality and habitat in the high-value trout streams of West Virginia and Virginia. We look forward to discussing these concerns further. Questions may be directed to David Kinney, Trout Unlimited Mid-Atlantic Policy Director, at 856-834-6591 or dkinney@tu.org.

Sincerely,

David Kinney
TU Mid-Atlantic Policy Director

Kevin Daniels
Chair, Virginia Council of TU

Lee Orr
Chair, West Virginia Council of TU

Tom Benzing
Conservation Chair,
Virginia Council of TU

Randy Kesling
Conservation Chair,
West Virginia Council of TU

CO82-11 Where necessary, Atlantic and DETI would improve unsuitable dirt and gravel roads through widening and/or grading, installing or replacing culverts, or clearing overhanging vegetation or tree limbs; improvements would be based on need. In addition, where culverts require replacement, they would be sized to accommodate flows and countersink beneath the bed of the waterbody to allow passage of aquatic organisms. As is noted by Trout Unlimited, many existing access roads are not designed to these standards so replacement of existing culverts would serve to improve movement of aquatic organisms.

COMPANIES/ORGANIZATIONS COMMENTS

CO82 – Trout Unlimited (cont'd)

*Perennial trout streams crossed by the Atlantic Coast Pipeline right-of-way. Streams in **bold** are in Trout Unlimited-identified resilient or redundant eastern brook trout habitat patches. Some are crossed multiple times.*

Tenmile Creek
Right Fork Middle Fork River
Dry Run
Beech Run
Phillips Camp Run
Back Fork Elk River
Hewett Fork
Valley Fork
Big Spring Fork
UNT Clover Creek
Clover Creek
UNT Shock Run
UNT Warwick Run
UNT Lick Draft
Lick Draft
Back Creek
Stony Run
Morris Run
Jackson River
Laurel Run
Mill Creek
UNT Hamilton Branch
Hamilton Branch
Tizzle Run
Benson Run
Tim's Run
Calfpasture River
UNT Calfpasture River
White Rock Branch
Hodges Draft
Ramseys Draft
Broad Draft
UNT Broad Draft
Dowell's Draft
White Oak Draft
Camp Ridge Draft
Stoutameyer Draft
UNT Jennings Branch
Jennings Branch
Middle River
Folly Mills
UNT Folly Mills
Mills Creek
Orebank Creek
UNT Back Creek
Back Creek
Spruce Creek
South Fork Rockfish River

COMPANIES/ORGANIZATIONS COMMENTS

CO83 – National Trust for Historic Preservation

National Trust for Historic Preservation
Save the past. Enrich the future.

April 6, 2017

Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First St. NE, Room 1A
Washington, DC 20426

Re: Atlantic Coast Pipeline
Comments on Draft Environmental Impact Statement
CP14-554-001

Dear Mr. Davis:

The National Trust for Historic Preservation has serious concerns about the Draft Environmental Impact Statement (DEIS) prepared for the Atlantic Coast Pipeline (ACP) project. Many of the issues raised by the review of this project reflect broader compliance problems applicable to the Federal Energy Regulatory Commission (FERC), and inconsistencies between FERC's review process and the regulations implementing Section 106 of the National Historic Preservation Act (NHPA), 36 C.F.R. Part 800.

- **Interests of the National Trust**

The National Trust for Historic Preservation is a private nonprofit organization chartered by Congress in 1949 to facilitate public participation in the preservation of our nation's heritage, and to further the historic preservation policy of the United States. *See* 54 U.S.C. §§ 312102(a), 320101. With more than 800,000 members and supporters around the country, the National Trust works to protect significant historic sites and to advocate historic preservation as a fundamental value in programs and policies at all levels of government. In addition, the National Trust is designated by Congress as a member of the Advisory Council on Historic Preservation (ACHP), *id.* § 304101(a)(8), which is responsible for overseeing agency compliance with Section 106. We have extensive experience in reviewing undertakings subject to federal licenses and permits, not only as a consulting party, but also by enforcing compliance with the NHPA through litigation, either as a plaintiff or a friend of the court.

The National Trust has been contacted by members of the interested public, as well as historic preservation and environmental organizations, concerned about this and other pipeline projects. We are hearing expressions of frustration from those attempting to ensure that FERC will engage in meaningful consultation under Section 106.

The Watergate Office Building 2600 Virginia Avenue NW Suite 1100 Washington, DC 20037
E law@savingplaces.org P 202.588.6035 F 202.588.6272 www.PreservationNation.org

CO83-1

- **FERC has failed to respond to consulting party requests, or has improperly rejected consulting party requests, even from local governments.**

FERC's pattern of denying requests from stakeholders interested in participating as consulting parties is not consistent with the Section 106 regulations. Upon information and belief, FERC has excluded local governments from participating as consulting parties, even though the Section 106 regulations explicitly require that "a local government with jurisdiction over the area in which the effects of an undertaking may occur is *entitled to participate* as a consulting party." 36 C.F.R. § 800.2(c)(3) (emphasis added). When local governments request the right to participate in Section 106 consultation, FERC has no authority to decline those requests. Moreover, the National Trust understands that requests from local historical organizations to participate as consulting parties have also been declined. These types of local organizations often are some of the best sources of historic property identification information. Additionally, we understand from the DEIS that FERC has systematically declined requests for consulting party status made by cultural resource organizations, and has instead provided these organizations with copies of the cultural resource survey reports to review and comment on outside of the Section 106 review process. DEIS 4-434. This approach is confirmed by a letter dated February 11, 2016 from David Swearingen to the Augusta County Historical Society. This failure to include the Augusta County Historical Society, and similar organizations, as consulting parties, and instead requesting that they review survey information and submit comments outside of the defined Section 106 consultation is not supported by any federal law, and is arbitrary, capricious and an abuse of discretion.

- **FERC has failed to engage in proper "consultation."**

CO83-2

Consultation is defined in the Section 106 regulations as a "process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the section 106 process." 36 C.F.R. § 800.16(f). "Consultation is built upon the exchange of ideas, not simply providing information." 63 Fed. Reg. 20,496, 20,504 (Apr. 24, 1998) (Secretary of the Interior's Standards & Guidelines for Federal Agency Historic Preservation Programs Pursuant to the NHPA). This process of dialogue is simply not occurring as part of FERC's review process.

- **The DEIS fails to substantiate the purpose and need for the project.**

CO83-3

In September 2016, the Southern Environmental Law Center and Appalachian Mountain Advocates released a study by Synapse Energy Economics, Inc.,[1] which concludes that the Atlantic Coast Pipeline and the Mountain Valley Pipeline are *not needed*, because existing pipelines can supply sufficient power to the region through 2030. The DEIS fails to address this analysis.

[1] Synapse Energy Economics, Inc., *Are the Atlantic Coast Pipeline and the Mountain Valley Pipeline Necessary? An examination of the need for additional pipeline capacity into Virginia and Carolinas* (Sept. 12, 2016). The report can be accessed at: https://www.southernenvironment.org/uploads/words_docs/Synapse_Report_WV-VA_Proposed_Pipelines_FINAL_20160909.pdf?cachebuster:42.

CO83-1 See the response to comment FA4-1.

CO83-2 Comment noted.

CO83-3 See the response to comment CO46-1.

- **FERC has failed to identify historic resources accurately and comprehensively.**

CO83-4 The National Trust has heard many concerns regarding the inadequacy of the cultural resource survey efforts made for the ACP. One example that has been raised is the complete omission of historic stone walls in eastern Augusta County. Several of these mortar-less walls, which were used to contain livestock by early Scottish settlers, are directly in the path of ACP. Despite this, the walls are not included in the DEIS. Other examples have been raised by groups such as the Augusta Historical Society and Preservation Virginia.

- **FERC has failed to address potential impacts to the Union Hill/Woods Corner Rural Historic District.**

CO83-5 One of the compressor stations for the ACP project is currently proposed to be sited in the Union Hill/Woods Corner Rural Historic District in Buckingham County, Virginia. The DEIS does not include any information about the Union Hill/Woods Corner Historic District, even though it is currently under review by the Virginia Department of Historic Resources. Additionally, Preservation Virginia listed this site on its list of "Most Endangered Historic Places" in May 2016. The project applicants and FERC should certainly be aware of the existence of this historic resource.

The Union Hill/Woods Corner Rural Historic District is a rural community that was established by African-Americans after Emancipation on former plantation land. Additional research and fieldwork is needed for the proposed compressor station site, including surveying extant buildings, archaeological sites, cemeteries, and viewsheds within the historic district. Moreover, the DEIS contains no consideration of the environmental justice concerns related to siting the only compressor station for the state of Virginia in this traditionally African-American community. The perfunctory discussion of environmental justice concerns included in the DEIS is not sufficient to satisfy federal legal obligations under Executive Order 12898, *Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations*. DEIS 4-411. The proposal to site the compressor station at this location should be thoroughly reevaluated, and alternative sites should be more closely explored.

CO83-6

- **The project route should avoid land held in conservation easements.**

CO83-7 Since its founding by the Virginia General Assembly in 1966, the Virginia Outdoor Foundation (VOF) has acquired conservation easements on more than 750,000 acres of land across the state. The founding legislation for VOF states its purpose as "to promote the preservation of open-space lands and to encourage private gifts of money, securities, land or other property to preserve the natural, scenic, historic, scientific, open-space and recreational areas of the Commonwealth." Va. Code Ann. §10.1-1800. The proposed route for ACP would run through at least ten properties that are currently protected by conservation easements held by VOF. If this route is permitted, the ACP would constitute

CO83-4 See the response to comment LA21-2.

CO83-5 See the response to comment CO49-1.

CO83-6 See the response to comment CO49-2.

CO83-7 The final EIS discussion of VOF conservation easements has been updated based on information from Atlantic, the VOF, and other appropriate permitting and regulatory authorities.

See the responses to comments CO3-1 and CO10-3.

CO83-7 (cont'd) the largest disturbance of conserved lands in the history of Virginia's conservation easement program.

The permit applicants for the ACP have proposed exchanging land to offset the ACP's impacts to conserved lands. Virginia state law establishes very narrow grounds for when such exchanges can be approved. The key questions are whether the proposed project is "in accordance with the official comprehensive plan for the locality" and "essential to the orderly development and growth of the locality." Va. Code Ann. §10.1-1704. Given that the ACP is intended to transport gas across the state, not deliver it to specific localities, it is impossible for the project to meet this state statutory standard.

The ACP would permanently damage the rural character of the conserved lands that it would cross, causing a direct harm to those lands and resources. Moreover, the harm to conserved lands generally will stretch beyond the direct impacts to the lands along the project route. The success of Virginia's conservation easement program relies on the public voluntarily donating easements to VOF with the knowledge that their land will be protected from development in perpetuity. If the ACP is permitted to cross conserved lands - in direct conflict with the state's conservation easement program laws – it will harm the conserved lands through which the pipeline passes and it will permanently damage the public trust in the effectiveness of this program. Approving the ACP to pass through conservation easements will also establish a precedent for future linear infrastructure projects to be routed through conserved lands, further undermining the effectiveness of the VOF easement program. These reasonably foreseeable negative cumulative impacts deserve close consideration in the DEIS.

- **FERC erroneously treats rural historic districts as discontiguous collections of architectural resources, without adequate consideration of the landscape and setting of the historic districts.**

CO83-8 The proposed pipeline and compressor stations would physically traverse several historic districts, including Union Hill/Woods Corner Rural Historic District, Yogaville Historic District, South Rockfish Valley Rural Historic District, Sunray Agricultural Historic District and Warminster Rural Historic District. FERC fails to adequately acknowledge the adverse effects of this direct, physical intrusion on so many historic districts.

NPS Bulletin # 30 states that the following changes to historic landscapes can threaten historic integrity: (1) changes in land use and management that alter vegetation; (2) changes in land use that flatten the contours of land; (3) introduction of non-historic land uses (public utilities, industrial development); and (4) loss of vegetation related to significant land uses. NPS, *Guidelines for Evaluating and Documenting Rural Historic Landscapes* (1999) (https://www.nps.gov/nR/publications/bulletins/pdfs/nrb30.pdf). If constructed, the ACP would introduce each of these types of changes, and would threaten the historic integrity of the affected landscapes.

- **FERC has failed to coordinate NEPA and Section 106 review, and released the Draft EIS before completing the identification of historic properties or initial assessment of effects.**

CO83-8 Comment noted. The EIS discusses historic districts in section 4.10.1.1.

CO83-9 It is clear in the DEIS that FERC has not completed the process of assessing adverse effects on historic properties (or even the process of *identifying* all historic properties that are potentially affected). DEIS at 4-415. Most of the sites that have been identified have not yet been evaluated for their potential National Register eligibility. *See generally* DEIS 4-420 - 4-424; 4-428-4-430. Additionally, even for those historic resources that *have* been identified and evaluated by the ACP contractors, the DEIS fails to include information adequate to understand why a property is recommended as eligible or not eligible for the National Register. There is also inadequate information provided, and often *no* information provided, to analyze the potential effects of the pipeline on any specific resources. *See, e.g.,* DEIS at 4-432 (the Borland Farm is recommended as not eligible, with no explanation as to why, and despite being recommended as not eligible, the treatment recommendation from ACP is "pending").

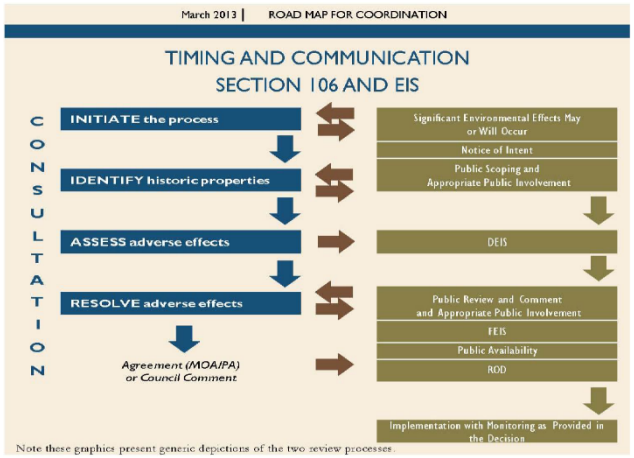
These major gaps in the identification of historic properties and potential adverse effects make it impossible for the DEIS to perform its essential function of *disclosing*—to the public and to the agency—the potential impacts of the proposed action. "If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives [which it is in this case,] and the overall costs of obtaining it are not exorbitant, the agency *shall include* the information in the [EIS]." 40 C.F.R. § 1502.22(a) (emphasis added).

The inadequacy of the evaluation of historic resources in the DEIS is further illustrated by guidance issued recently by the Council on Environmental Quality (CEQ) and the ACHP regarding the integration of NEPA and Section 106. The guidance states that proper coordination of the two review processes "ensures that determinations regarding which alternatives to advance for detailed analysis and which alternative is selected as the preferred alternative are made with an appropriate awareness of historic preservation concerns." *Id.* at 27.

A chart included in the guidance describes the correct sequence of procedural steps. As the chart illustrates, to properly coordinate the timing of Section 106 review and preparation of an EIS, the agency should have completed the identification of historic properties prior to the issuance of the DEIS. The DEIS should also include an initial assessment of effects. Failure to include this information renders the DEIS ineffective in disclosing potential impacts of the project to the public.

CO83-9 See the response to comment CO70-2.

CO83-9 (cont'd)



CEQ and ACHP, *NEPA and NHPA: A Handbook for Integrating NEPA and Section 106*, at p.26 (Mar. 2013). (The *Handbook* can be accessed at: www.achp.gov/docs/NEPA_NHPA_Section_106_Handbook_Mar2013.pdf.)

- **FERC is unlawfully allowing identification of historic properties to be deferred until late in the review process.**

CO83-10 Section 106 of the NHPA requires agencies to take into account the effects of their decisions on historic properties "prior to" issuing any license. 54 U.S.C. § 306108. In cases where, for some reason, "effects on historic properties cannot be fully determined prior to approval of an undertaking," 36 CF.R. § 800.14(b)(1)(ii), the appropriate approach is to develop a programmatic agreement pursuant to the Section 106 regulations.

The whole point of the Section 106 review process is to develop and evaluate alternatives and modifications to the project that would avoid, minimize, or mitigate harm to historic properties. *Id.* §§ 800.1(a), 800.6(a). This is why the agency is required to "ensure that the section 106 process is initiated early in the undertaking's planning, so that a broad range of alternatives may be considered during the planning process." *Id.* § 800.1(c). FERC's approach of deferring Section 106 consultation until after key decisions have already been made severely limits the consideration of alternatives that could avoid, minimize or mitigate harm to historic resources. FERC's approach also creates a serious risk of foreclosing altogether the ACHP's opportunity to comment on the undertaking. *Id.* § 800.9(b).

6

CO83-10 Comment noted.

CO83-10 (cont'd)

The Atlantic Coast Pipeline is part of an unprecedented expansion of fracked-gas infrastructure projects across Virginia, West Virginia and North Carolina. The review process under NEPA and the NHPA is intended to ensure that, if this project moves forward, its negative impacts to natural and cultural resources would be avoided, minimized, and/or mitigated. The procedural issues identified in this correspondence cast real doubt on the effectiveness of FERC's review process. Without full compliance with NEPA and Section 106 of the NHPA, irreparable damage will occur to cultural resources along the route.

Thank you for considering these comments. We look forward to participating in the Section 106 consultation and helping FERC to resolve the issues identified in this letter.

Sincerely,

Sharee Williamson
Associate General Counsel

cc: Heather Campbell, Federal Preservation Officer, FERC
John Eddins, Charlene Vaughn, and Reid Nelson,
Advisory Council on Historic Preservation
Ted Boling, Council on Environmental Quality
Roger Kirchen, Virginia Department of Historic Resources
Elizabeth Kostelny, CEO, Preservation Virginia
Greg Buppert, Southern Environmental Law Center
Kate Wofford, Shenandoah Valley Network

COMPANIES/ORGANIZATIONS COMMENTS

CO84 – Satchidananda Ashram-Yogaville, Inc.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Atlantic Coast Pipeline, LLC **Docket Nos. CP15-554-000**
CF15-554-001
CP15-555-000

COMMENTS IN RESPONSE TO THE ATLANTIC COAST PIPELINE DRAFT ENVIRONMENTAL IMPACT STATEMENT
by
SATCHIDANANDA ASHRAM-YOGAVILLE, INC.

Intervenor Satchidananda Ashram-Yogaville, Inc. (the "Ashram") submits the following comments regarding the Federal Energy Regulatory Commission's ("FERC") draft environmental impact statement ("DEIS") for the proposed Atlantic Coast Pipeline project ("ACP"). The Ashram already has full party status by virtue of its motion to intervene filed previously in the ACP proceeding.[1] Because the DEIS is based on incorrect and incomplete information and thus fails to properly assess the adverse impacts of the ACP on the Ashram, it does not satisfy the requirements of the National Environmental Policy Act ("NEPA"). FERC must revise the DEIS to remedy those deficiencies and reissue the document for public comment.

To build the pipeline it proposes in the above Docket, Atlantic Coast Pipeline, LLC

[1] *See Motion to Intervene and Protest of Appalachian Mountain Advocates, Appalachian Voices, Chesapeake Climate Action Network, Doddridge County Watershed Association, Eight Rivers Council, Greenbrier River Watershed Association, Satchidananda Ashram-Yogaville, Inc., Shannon Farm Community, Sierra Club, West Virginia Rivers Coalition, and West Virginia Highlands Conservancy*, Docket Nos. CP15-554-000, et al. (Oct. 23, 2015) ("Ashram Intervention Motion"). The Ashram joined the motion as an individual movant, requesting independent intervenor status.

(ACP) proposes a route that places the large hazardous natural gas pipeline dangerously close to Satchidananda Ashram-Yogaville. Using inaccurate distance data and incomplete analysis, the DEIS concludes that the Ashram would not be seriously impacted by the pipeline. In reality, the Ashram would be directly and negatively impacted by the proposed gas pipeline, compressor station and other related facilities. Both the construction and operation of the proposed pipeline and compressor station would put the Ashram's economic survival at risk, hinder its spiritual practices and ability to carry out its mission of offering these services to others, and present serious health and safety risks to the Ashram and surrounding community. Accordingly, the Commission should reject the application, as amended. In the alternative, the Commission should set the application for an evidentiary hearing to fully address contested issues.

II. DESCRIPTION OF SATCHIDANANDA ASHRAM-YOGAVILLE, INC.

The Ashram is a spiritual community, located on 660 acres, in Buckingham, Virginia, with a Monastic Order, an Order of Integral Yoga Ministry, other spiritual aspirants, and staff. It also serves as headquarters for its world-renowned international headquarters, Integral Yoga International. Over 10,000 visitors each year come to experience a peaceful, tranquil wholesome environment while learning about the yogic teachings and lifestyle as taught through the Integral Yoga teachings of Sri Swami Satchidananda. Visitors come to restore and enhance their health, engage in spiritual and religious practices, silent retreats, and participate in the Ashram's educational programs.

III. FERC's DEIS fails to adequately analyze the adverse impacts of the ACP Project to the Ashram

The Ashram opposes the proposed ACP gas pipeline, compressor station and other related facilities due to the substantial harm that would result from the construction and operation of the pipeline project. The adverse impacts warrant

Commission rejection of the proposal. The Commission should deny the application, as amended previously and reported on in the Draft Environmental Impact Statement (DEIS), or at a minimum, set the application for evidentiary hearing to address the contested issues, including a lack of a comprehensive justification of need for the ACP.

Like the original application, and the amended application, the DEIS fails to account for the significant adverse effects of the proposed ACP. Instead, the DEIS states the distance from the ACP to Yogaville incorrectly, with no regard to the fact that the ACP route has been moved twice closer to Yogaville property, homes, school, shrines, and the LOTUS Temple, thus increasing the likelihood on any accident, leak, fire, and explosion from the hazardous fuel transmitted in the pipeline having a devastating impact on our property, our residents, students, and staff, and on the pristine atmosphere required for our successful operation and spiritual practices.

There are two inaccurate references to Yogaville under two sections of the DEIS.

CO84-1 One section is **SOCIOECONOMICS - Third section, third paragraph** (pg. 4-398), where it states:

"Regarding concerns expressed about the impact on Yogaville and its Ashram, the DEIS states: "Yogaville is located over 4 miles from ACP and, therefore, we conclude no direct or indirect impacts on tourism and visitation to Yogaville would result from construction and operation of the projects."

CO84-1 The distance of the ACP project to Yogaville and the Light of Truth Universal Shrine has been updated in section 4.9.5.

CO84-1 (cont'd) The distance between the ACP and Yogaville as stated in the DEIS is grossly incorrect.

The correct information is that the Ashram's property is 1,000 ft. from the ACP, the Ashram's school and many homes are between 1600 ft. to 1900 ft. distant, and the LOTUS Temple would be 3307 ft. from the ACP. Thus the DEIS conclusion that there would be *"no direct or indirect impacts on tourism and visitation to Yogaville would result from construction and operation of the projects"* is flawed, incomplete, and based on wrong data.

Ms. Carla Y. Picard, External Affairs Manager for Dominion Energy, has confirmed this error in the DEIS in her January 3, 2017 email to Joseph Jeeva Abbate of Yogaville Environmental Solutions. In her email, Ms. Picard notes that our corrected distances (as listed above) "more closely depict the route's proximity to Yogaville" than the incorrect distances noted in the DEIS. She continues to clearly state "…this is an inaccuracy in the FERC DEIS document, and we have also flagged it as an item to correct with FERC."

CO84-2 The second section in this overview referencing Yogaville is under "**CULTURAL RESOURCES** (pg. 4-414)" in the third paragraph, where it states,

"We asked Atlantic to consider effects on the Yogaville cultural site, and they responded that the pipeline route is located approximately 0.5 mile to the southwest of the proposed boundaries of the historic district and, therefore, no impacts on the proposed district as a result of construction and operation of ACP are anticipated. The Virginia Department of Historic Resources has not provided comments on potential effects of ACP on

CO84-2 Section 4.10.1.1 includes our discussion of cultural resources impacts on the Yogaville historic district. The inventory, evaluation, and assessment of effects to the historic district is not complete.

CO84-2 (cont'd)

Yogaville." (Pg. 4-419)

Again, we have a flawed conclusion that "*no impacts on the proposed district as a result of construction and operation of ACP are anticipated"* based on inaccurate distance and the lack of necessary feedback from the Virginia Department of Historic Resources.

The Ashram has detailed the ACP's negative effects in its previously filed motion to intervene and protest submitted in Commission Docket Nos. CP15-554-000, *et al.* regarding the original ACP application,[2] and in the Ashram's comments provided in the pre-filing proceeding in Docket Nos. PF15-6-000, *et al.*[3] The Ashram's filings also indicate that there is no need for the ACP, which would forgo the benefits of the clean energy resources that the ACP would displace. The Ashram incorporates by reference herein each of the filings that it has submitted in the Commission proceedings concerning the proposed ACP, in Docket Nos. CP15-554-000, *et al.*, and PF15-6-000, *et al.*

These comments in response to the DEIS, including the Ashram's prior filings in the ACP proceedings, address the interests and positions of the Ashram to the extent known at this time. It reflects new developments relevant to the proceeding, which have occurred since the original ACP application, and since the follow-on Protest document submission was also filed. The Ashram notes that information regarding the proposed ACP continues to be disclosed, including Dominion's

[2] *See* Ashram Intervention Motion.
[3] *See, e.g.*, Letter of Swami Karunananda filed on behalf of Ashram, Docket No. PF15-6-000 (May 4, 2015).

supplemental materials filed after its amended application was submitted and after the release of the DEIS.[4] The Ashram reserves the right to submit further evidence and arguments in this proceeding, as circumstances may warrant.

A. Proposed Gas Compressor Station and Pipeline Present Health and Safety Risks

Construction and operation of facilities related to the pipeline, including the proposed gas compressor stations, will adversely affect communities including the Ashram and other surrounding communities in Buckingham County. The compressor station that would be constructed in Buckingham County would be 5.5 miles from the Ashram, thus exposing the surrounding community and the Ashram to the pollution and associated harms it would bring. FERC's DEIS fails to account for the risk of adverse impacts on communities near the proposed compressor stations. The amended application proposes to increase the Buckingham County compressor station horsepower (HP) from 40,715 to 53,515 HP,[5] increasing the magnitude of the risks.

CO84-3

The pollution and noise emitted from compressor stations, and associated health and safety risks, are well known. Noxious fumes, increased toxic poisoning levels, radioactive materials and large amounts of contaminants have been reported at compressor sites, including cancer-causing volatile organic compounds. Air

[4] Following the issuance of the Commission's March 22 Notice of the amended application, ACP partner Dominion Transmission, Inc. submitted further information in this proceeding, including site plans, archaeological and historic survey reports and agency correspondence. *See* Supplemental Information filed by Dominion Transmission, Inc., Docket Nos. CP15-554-000 (Mar. 24, 2016).
[5] Notice of Amendment at 1.

CO84-3 Section 4.11.1.3 demonstrates that Compressor Station 2 would be below major source thresholds for federal air permitting programs and would comply with the NAAQS. See the response to comment CO68-17 regarding low frequency noise.

CO84-3 (cont'd) pollution comes from compressor blowdowns that release large amounts of toxic chemicals into the atmosphere. Compressor noise, both audible and low frequency, has produced reported negative health effects.

A study detailing the adverse impacts of the ACP, including the risks presented by the proposed compressor station in Buckingham, references various findings regarding the negative health effects of compressor stations. Among other findings, it cites to an environmental agency report indicating that "pollution around compressor stations is common and severe," and noting "high rates of illnesses such as nosebleeds and respiratory difficulties among people living near the stations."[6]

It is the Ashram's understanding that the latest proposed pipeline route would bring the pipeline only 1,000 ft. from the Ashram's property line, and within 1607 ft. from an Ashram school, within 1870 ft. of numerous homes of many Ashram community residents, and within 3307 ft. from the Light of Truth Universal Shrine ("LOTUS"), an interfaith temple that draws visitors from across the country

CO84-4 and globe, and within 2640 ft. of our Kailash shrine. The Key-Log Economics study documents the potential impact of the ACP in stating, "Properties outside the ROW, but still near the pipeline, would also suffer a loss in value. First there is a **"high**

CO84-5 **consequence area"**, within which one's survival of an explosion would be unlikely. The high consequence area would be 0.4 miles wide (1,092 feet on either side) for a

[6] Key-Log Economics LLC, *Economic Costs of the Atlantic Coast Pipeline: Effects on Property Value, Ecosystem Services and Economic Development in Western and Central Virginia* at 28-29 (Feb. 2016, as updated Mar. 2016), at http://keylogeconomics.com/wp1/wp-content/uploads/2016/03/EconomicCostsOfTheACP_TechnicalReport_REV201603.pdf.

CO84-4 Comment noted.

CO84-5 See the response to comment CO67-14.

CO84-5 (cont'd) pipeline of this size. There is also a **1.4-mile-wide evacuation zone** (3,583 feet on either side), defined as the area an unprotected human would need to move beyond in order to avoid burn injury in the event of an explosion or a fire following a leak. Living with the 24/7/365 possibility of having to evacuate one's home or business at a moment's notice, if notice is even possible, diminishes the value of the property to its owner."

CO84-6 Additionally the Ashram would likely need to close its operations and lay off staff during the year or more of pipeline construction period. Dominion staff agreed publicly with Ashram managment that the pipeline construction would be disturbing to the peace and quiet of our community and shrines.

B. Proposed Gas Pipeline and Compressor Station Would Create Adverse Economic Impacts

CO84-7 A recent study of the economic impact of the proposed pipeline and compressor station demonstrates the negative economic impact of the proposal in the four-county region examined, which includes Buckingham County where the Ashram is located.[7] Property values, economic development and ecosystem services in Western and Central Virginia would be adversely affected. According to the study's findings regarding Buckingham County, the County would incur as much as

[7] Key-Log Economics LLC, *Economic Costs of the Atlantic Coast Pipeline: Effects on Property Value, Ecosystem Services and Economic Development in Western and Central Virginia* (Feb. 2016, as updated Mar. 2016) at http://keylogeconomics.com/wp1/wp-content/uploads/2016/03/EconomicCostsOfTheACP_TechnicalReport_REV201603.pdf.

CO84-6 Comment noted.

CO84-7 See the response to comment CO68-15.

CO84-7 (cont'd)

$20.8 million in one-time costs, plus annual losses of as much as $7.1 million.[8] Buckingham County, one of the poorest counties in Virginia, can ill afford such harmful economic impacts.

The study shows that the Ashram's role as an "important economic engine in western Buckingham County" would also be impacted.[9] Ashram revenues from visitor stays help support economic activity locally and in the region in the form of jobs, local company contracts, food purchases from farms and wholesale companies, and transportation to and from regional airports, train and bus stations. Ashram visitor surveys indicate visitors will be less likely to come to the Ashram if the pipeline is constructed. The air and noise pollution from the proposed compressor station is likely to create an environment that is no longer conducive to silent prayer and meditation and the peaceful atmosphere provided at the Ashram. The offering of a peaceful atmosphere is key to fulfilling the Ashram's mission, and draws visitors to this sacred space. The degradation of the atmosphere will impede the Ashram's ability to serve visitors consistent with its mission, and the resulting decrease in visitor stays will have a negative economic impact on the Ashram and surrounding community and region.

C. ACP Threatens Ashram's Historic Cultural Uses and Properties

[8] *See* Key-Log Economics LLC, *Buckingham County and the Atlantic Coast Pipeline: Summary of Economic Effects* at 2 (Feb. 2016), at http://keylogeconomics.com/wp-content/uploads/2016/05/ACPCosts_BuckinghamCounty_Summary_REVISED_20160516.pdf ("Buckingham Study Summary").
[9] Buckingham Study Summary at 4.

CO84-8 On January 23, 2016, the Ashram was identified by the Virginia Department of Historic Preservation (VA DHR) as eligible for nomination for National Register of Historic District status. The Historic District would be negatively impacted by the pipeline and compressor station being located so close to the property, as described above and in previous Ashram filings. The modified pipeline route is now even closer to the Ashram, as we have stated previously, and almost right up against the Ashram's property line.

The historic cultural uses of the Ashram's lands and buildings have been recognized during the Historic District consideration process and various buildings, including the interfaith LOTUS temple, also have historical value in themselves. The proposed pipeline would come perilously close to this world-renowned treasure, the first temple of its kind in the United States, which is a sanctuary and place of meditation, contemplation and prayer for people of all faiths. Similarly, the proposed pipeline would also run close to the Ashram's sacred Kailash - Lord Nataraja Shrine, gifted by the former Ambassador to the United States, Dr. Karan Singh, which is the largest outdoor Lord Nataraja shrine in the country.

In the eligibility process for National Register status, Yogaville's quiet rural setting, its vistas of several miles along the James River and more distant Blue Ridge Mountains, its system of hiking trails, and huge organic farm are as key to promoting the mission that underlies the founding of Yogaville as are its community buildings. Yogaville District encompasses beyond the borders of the Ashram to include all those properties on both sides of Rt. 604 and arterial roads in either direction where community members have built residences and businesses in order to live together

CO84-8 See the response to comment CO84-2.

CO84-8 (cont'd)

and support this mission. Every aspect of this mission and its purpose-led growth in residents, health education and yoga programs, and economic livelihoods would be negatively impacted by the pipeline and compressor station located so close to Yogaville and its community, as described above and in previous FERC filings.

V. CONCLUSION

WHEREFORE, for the reasons stated above, the Ashram notes that the DEIS provides inaccurate vital information re: the distance of the pipeline from the Ashram, its property, its school, its residents, its sacred shrine and temple, and its main campus. The DEIS conclusions re: the lack of significant impact from the ACP to the Ashram are inaccurate, unacceptable, and indicative of incomplete and faulty analysis. The Ashram respectfully requests that the Commission rescind the deficient DEIS, revise the DEIS to include accurate information on the impacts of the proposed ACP project on the Ashram, and reissue the DEIS for public comment.

Respectfully submitted,

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Dated: April 4, 2017

Z-1312

COMPANIES/ORGANIZATIONS COMMENTS

CO85 – North Carolina Coastal Federation

North Carolina Coastal Federation
Working Together for a Healthy Coast

April 3, 2017

Nathaniel J. Davis, Sr.
Deputy Secretary, Federal Energy Regulatory Commission
888 First Street NE., Room 1A
Washington, DC 20426

RE: Notice of Availability of the Draft Environmental Impact Statement for the Proposed Atlantic Coast Pipeline, Supply Header Project, and Capacity Lease Proposal

Dear Mr. Davis,

Please accept these comments on behalf of the North Carolina Coastal Federation in regards to the Atlantic Coast Pipeline, proposed by Atlantic Coast Pipeline, LLC, Dominion Transmission, Inc., and Piedmont Natural Gas Company, Inc.

We believe there are significant reasons to request a new Draft Environmental Impact Statement (DEIS), or at the very least, a supplement to the current DEIS document that was made public on December 30, 2016. The obvious environmental impacts to water quality, aquatic organisms, and overall ecosystem health are apparent, yet minimally outlined in the DEIS. Further, according to a document prepared for the Southern Environmental Law Center (SELC)[1], stark economic realities are assessed and the very need for this project is called into question.

We would contend that very little is known on the impact of natural gas leaks, and its impact to waterways. Leaks in natural gas systems (both pipelines and storage) seem to be common especially in aging pipeline systems). It is clear that more studies need to be conducted to adequately assess the risk of leaks, especially since this project proposes to cross 20 major waterbodies in North Carolina, Virginia, and West Virginia; there are few, outdated studies available to address this issue. Further, the Pipeline and Hazardous Material Safety Administration, or PHMSA, is responsible for millions of miles of pipeline (both gas and oil) and is currently only funded for 137 inspectors. Because of this limitation, much of the industry is self-inspected, which many believe further accentuates the risk for leaks.

[1] Rachel Wilson, et al, *Are the Atlantic Coast Pipeline and the Mountain Valley Pipeline Necessary?*, Synapse Energy (2015), http://www.synapse-energy.com/sites/default/files/Virginia-NG-Pipeline-Report-15-049.pdf

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Z-1313

CO85-1 See the response to comment CO6-1.

CO85-2 See the response to comment CO46-1.

CO85-3 We disagree that leaks in newly constructed pipelines are common, and extensive studies have been conducted to determine the appropriate specifications for constructing and designing pipelines. ACP is new pipeline and would be designed and operated to meet DOT safety requirements, as discussed in section 4.12.

CO85-4 Comment noted. Funding for the DOT and PHMSA is outside the scope of this EIS.

North Carolina Coastal Federation

CO84-5 In the DEIS, there are many documents not included. Most notable is the request from the North Carolina Wildlife Resources Commission (NCWRC) and the North Carolina Department of Environmental Quality (NCDEQ) for the applicants to complete biological surveys for sensitive and state-listed species, including plants, non-mussel aquatic species, and freshwater mussels. These surveys are not completed, as 15.2 miles have not been surveyed, at all, for the aforementioned biological resources. The DEIS simply states that these surveys will be "completed in 2017." The Federation finds this information absolutely essential to the validity of the DEIS document; the DEIS should not be considered complete until these remaining 15.2 miles are surveyed.

CO84-6 As for economics, it is clear that the originally forecasted numbers that boast the project's guaranteed success are inflated. Energy companies forecast that this project will bring in $48 million in labor income, from 2019-2038. However, this project is forecasted to bring in only 20 ongoing jobs for North Carolina once the pipeline is operational. Further, the construction force is expected to be mobile, moving with the progress of the pipeline. This would suggest that the construction employment would indeed be short lived.

CO84-7 Furthermore, ratepayers will carry the bulk of the risk of this project, in addition to paying for the construction; it is estimated that they will cover 96% of the project cost. Part of these projected economic benefits are derived from lower gas prices. Gas coming from the Henry Hub in Louisiana (historically the largest trading hub) in 2015 was averaging over $2 per MMBTU (one million British Thermal Units), while gas from the Dominion South Hub averaged $1.50 per MMBTU. This difference in price is largely due to abundance of gas from the Marcellus and Utica regions but as more pipeline capacity moves gas farther away from the region it is expected that the difference in price, and therefore the savings to ratepayers, will diminish.

CO84-8 Without further and intense study referencing the aforementioned environmental and economic details, we respectfully request a new DEIS, or a supplement to the current document. It is clear that with the current document, the permitting process cannot move forward. It is impossible to obtain a full assessment of the impacts of this project without a DEIS that contains all necessary information.

We thank you in advance for your consideration of these comments.

Sincerely,

Ladd Bayliss
Coastal Advocate

CO85-5 Section 4.7.1 recommends that construction of the projects be conditioned upon the completion of all outstanding biological surveys and any necessary consultations with federal and state agencies.

CO85-6 Comment noted.

CO85-7 The purpose and need for the project is described in section 1.1 of the EIS. This section summarizes Atlantic and DETI's stated objectives, which include serving the energy needs of public utilities and local distribution companies in Virginia and North Carolina; providing natural gas for direct residential, commercial, and industrial uses; increasing the reliability and security of natural gas supplies in Virginia and North Carolina; and providing access to a low cost supply hub.

Also see response to comment CO68-1.

CO85-8 See the response to comment CO6-1.