



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029**

APR 06 2017

Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Re: Atlantic Coast Pipeline and Supply Header Project Draft Environmental Impact Statement; North Carolina, Pennsylvania, Virginia, and West Virginia; December 2016 (FERC Docket No. CP15-554-000, CP15-554-001, CP15-555-000; CEQ#20160325)

Dear Deputy Secretary Davis:

In accordance with the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the EPA has reviewed the Draft Environmental Impact Statement (DEIS) for the Atlantic Coast Pipeline (ACP) and Supply Header Project (SHP) as proposed by Atlantic Coast Pipeline, LLC (Atlantic) and Dominion Transmission, Inc. (Dominion). Atlantic and Dominion request authorization to construct and operate 641.3 miles of natural gas transmission pipeline and associated facilities, three new natural gas-fired compressor stations, and four modified existing compressor stations. The projects would provide about 1.44 billion cubic feet per day of natural gas to electric generation, distribution and end use markets in Virginia and North Carolina. In addition, Atlantic and Piedmont Natural Gas Co., Inc. (Piedmont) request authorization to allow Atlantic to lease capacity on Piedmont's existing pipeline distribution system in North Carolina for use by Atlantic.

EPA appreciates the coordination done by FERC with federal agencies, and efforts made to incorporate suggestions from scoping and during development of the draft EIS. EPA is a cooperating agency for this DEIS and this comment letter jointly reflects the review and comments of EPA Regions 3 and 4. Our staffs have worked closely on this matter and we appreciate that FERC staff have regularly requested additional clarification and assistance.

This letter provides recommendations we believe would strengthen FERC's EIS as it is finalized, in the areas of geology and soils, streams and wetlands, and groundwater and drinking water protection. More detail on these recommendations, and additional suggestions to tighten the analysis in the final EIS are provided in the enclosed technical comments. EPA rates the environmental impacts associated with the preferred alternative as "Environmental Concerns" and the DEIS information as "Insufficient" under its DEIS rating scheme. See, www.epa.gov/nepa/environmental-impact-statement-rating-system-criteria. We look forward to discussing our comments with you and answering any questions you may have. EPA recognizes national energy needs and is committed to energy development and distribution while assuring environmental and human health protection.

We stand ready to assist FERC in addressing these and other issues that public comments may raise, in our cooperating agency role. Please contact Jeff Lapp, Associate Director at (215) 814-2717 or lapp.jeffery@epa.gov, or the staff contact for this project Ms. Barbara Okorn at (215) 814-3330 or okorn.barbara@epa.gov.

Sincerely,



John R. Pompono
Division Director
Environmental Assessment and Innovation Division

Enclosure (1) Technical Comments

Enclosure–Technical Comments
Atlantic Coast Pipeline and Supply Header Project

1) Geology and Soils

The DEIS indicates that challenging geologic conditions are likely to be encountered during project construction. We recommend that the final EIS provide additional risk and risk mitigation information on this issue. Given that blasting, in combination with steep slopes, sensitive karst topography, and active or abandoned mines and quarries, has the potential to result in adverse impacts, we recommend efforts be made to complete relevant ground reconnaissance surveys prior to release of the final EIS. EPA also recommends evaluating the potential effects of these geologic hazards, including mining-related subsidence, landslides and flash flooding, on pipeline construction and operation.

EPA believes it is especially important to evaluate potential impacts in high risk areas. This would include evaluating locations with high susceptibility to landslides and determining their proximity to streams. To aid in identification and evaluation of karst hazards, we recommend the Virginia Division of Conservation and Recreation’s “Karst Assessment Standard Practice” be used by Atlantic and Dominion investigators.

Similarly, we recommend that the final EIS describe the nature and extent of potential blasting impacts on local residents, drinking water wells, springs, wetlands, local hydrology, and other resources of special concern, as appropriate. We also recommend the practicability of monitoring be considered in hydrologically sensitive areas, such as karst terrain, to determine if wells have been affected, given the potential for alterations to flow paths and transmissivity. Practicable geohazard mitigation developed in coordination with the U.S. Forest Service may also warrant consideration in appropriate areas outside of forest lands.

EPA appreciates the special consideration that crossing karst streams and terrain has received in the DEIS. In light of the DEIS, which indicates over 50 percent of karst hazards throughout the 71 miles of karst terrain crossed are identified as “high risk,” we recommend the FEIS consider ecological risks to karst systems, and risk mitigation that includes avoidance measures. This would provide an appropriate NEPA “hard look” at issues related to the current DEIS conclusion that karst blasting and other construction activities would result in only temporary, insignificant impacts.

Finally, 152.7 miles of ACP route and 34 miles of SHP route were identified as areas with shallow bedrock based on the Soil Survey Geographic Database data. We recommend, to the extent practicable, that the area be surveyed for heavy metals, radioactive materials, and acid producing rocks with the potential for contamination of nearby water sources. This information could be used to implement best practices and limit potential impacts to groundwater.

2) Wetlands, Streams and Forests

The EIS reports 79.5 miles of pipeline will pass through wetlands. Construction of the ACP and SHP project would temporarily result in impacts to about 786.2 acres of wetlands (17.7 acres in West Virginia, 1.1 in Pennsylvania, 316.1 in Virginia, and 451.3 in North Carolina). The continued operation of the pipeline would impact about 248.3 acres of wetlands by permanent conversion (3.5 acres in West Virginia, 0.2 in Pennsylvania, 88.5 in Virginia, and 156.1 in North Carolina). The ACP and SHP facilities would cross 1,989 waterbodies (851 perennial, 779 intermittent, 248 ephemeral, 64 canals/diches, and 47 open water ponds/reservoirs). Permanent impacts from fill placed in wetlands totals 9.1 acres along the ACP and 0.5-acre along the SHP. Temporary workspace requested along the ACP route (1,272 acres) may add to this total, and water withdrawals may impact wetland and stream habitat.

EPA recommends that the final EIS complete ongoing wetland and stream surveys, and consider practicable avoidance and mitigation to incorporate into the project design and construction. We would be happy to assist you with this matter. Although wetland impacts in the DEIS are classified by system type, this classification does not provide details regarding the wetland quality or identify unique, difficult-to-mitigate wetland systems such as cypress gum swamps, vernal pools, bog, fen, or groundwater seeps, would be impacted. EPA recommends that specific information regarding high quality and unique wetland types be included, to the extent practicable, in the final EIS, so that appropriate mitigation can be considered.

Some aquatic resources are crossed using the open-cut method. As indicated in the DEIS, each open-cut crossing adversely affects aquatic resources. The Neuse River and Rocky Swamp crossing is of particular concern due and the location at a wide point in the floodplain. As described in the DEIS, using the dry-ditch method results in potential impacts to species and habitat, bank stabilization, and downstream aquatic resources. In addition, the proposed Neuse River crossing location will impact a large amount of bottomland hardwood wetlands, which could be substantially avoided with an alternative crossing location. We recommend the final EIS consider practicable alternative crossing locations for the Neuse River. More generally, the final EIS could be strengthened by describing whether and how the number of water crossings were minimized.

The DEIS acknowledges impacts by the proposed projects to forest resources and quantifies losses for construction and operation. The quantification indicates large impacts to forest resources (6,100 acres of deciduous, coniferous and mixed forest during construction and approximately 3,424 acres during operation). Studies to consider these impacts are ongoing and include a fragmentation study; Construction, Operational and Maintenance Plan; Migratory Bird Plan; Restoration and Rehabilitation Plan; Karst Mitigation Plan; geotechnical studies; and coordination with the U.S. Forest Service and other agencies. We recommend, to the greatest extent possible, inclusion of these studies, rare and endangered species studies, and a summary disclosure of the impacts to, and practicable mitigation for, watersheds, ecosystems, and ecosystem services in the final EIS.

Significant wetland, stream, and forest resources will be impacted by the proposal. An ACP and MVP collocation alternative is presented as a major route alternative in the DEIS. The DEIS concludes that the ACP and MVP collocation alternative offers some environmental advantages, including

avoidance of the Monongahela National Forest (NF) and George Washington NF, reduced crossings of the Appalachian National Scenic Trail and the Blue Ridge Parkway from two to one, and reduced construction within sensitive karst topography. However, FERC did not recommend the collocation option in light of constructability issues, and insufficient space. We recommend that the option of collocating minor portions of the route be considered as well, given the entire MVP route does not appear to have constructability concerns. We are working with FERC on collocation opportunities at the Neuse River Crossing in North Carolina. Success at this crossing may open other collocation opportunities.

3) Groundwater and Drinking Water Protection

The pipeline's proposed path has the potential to impact public and private drinking water supplies. We recommend the final EIS provide as complete a list as practicable of public and private supply wells and springs within the project area, and describe practicable avoidance and minimization measures to protect groundwater resources, especially in the Lyndhurst Area. We suggest that the final EIS describe efforts to minimize overall drinking water impacts through avoidance of Groundwater Assessment Areas (GAAs) and Wellhead Protection Area (WHPAs), and reducing proximity to WHPAs and wells. Upgraded construction could be required in areas where the final pipeline crosses WHPAs.

We support FERC's recommendation that the applicants complete field surveys for wells and springs within 150 feet of the construction workspace and within 500 feet of the construction workspace in karst terrain. We recommend inclusion of this information in the final EIS. In addition, we support FERC's recommendation that for wells and springs within 500 feet of identified contaminated soil or groundwater sites, Atlantic and Dominion should complete preconstruction and post-construction water quality tests, with landowner permission, and analyze for contaminants of concern from the potential source. We recommend describing the parameters for monitoring in the final EIS. We also recommend describing any communications strategy the applicants may be implementing for purposes of informing private well owners regarding potential impacts on their water supply. The final EIS could also discuss the practicability of pre- and post- construction well testing, where appropriate, in addition to preconstruction and post-construction water quality testing as ACP has proposed.

The DEIS mentions the Spill Prevention, Control and Countermeasure Plan to minimize potential groundwater impacts resulting from a spill during major earth disturbance activities. However, also of concern for contaminating drinking water are aboveground storage tanks (ASTs) containing potentially hazardous materials. During major earth disturbance activities, these ASTs could pose the risk of hazardous waste spills and cause serious threats to both groundwater and surface water drinking water resources. We recommend FERC encourage Atlantic and Dominion, as appropriate, to work with the West Virginia Department of Health and Human Resources and to survey the existing ASTs in Virginia that may be affected by major earth disturbances from the projects, and include this information in the final EIS. In West Virginia, AST information may be readily available from the Department of Environmental Protection and/or the Bureau for Public Health. We recommend ACP and Dominion notify AST owners when major earth disturbances will occur and develop a spill detection and response plan for hazardous materials ASTs.

Based on the information provided by state agencies, ten surface water intakes are located within three miles of the ACP, and eight source water protection watersheds would be crossed, three of which are in Zones of Critical Concern. Table 4.3.2-4 lists the surface water intake facilities within three miles and water protection areas crossed by the projects. We recommend that the final EIS describe activities that will be implemented to minimize the impact on surface water intakes and source water protection areas. Source Water Protection Plans contain valuable information and should be consulted when considering construction impacts and mitigation. We recommend FERC encourage Atlantic, as appropriate, to establish communication protocols with state agencies and public water utilities regarding construction activities and timelines near the surface water intakes and source water protection areas.

Please consider the following additional specific comments on the DEIS on the topics of water use and water designations:

- Pages 4-107-111: Hydrostatic tests would require 83.7 million gallons of water (see table 4.3.2-9) and 3.4 million gallons of water would be required for dust control. We recommend providing the proposed or potential sources of water used for hydrostatic tests and dust control, anticipated quantities of water to be appropriated from each source, and practicable measures that could be implemented to ensure water sources and aquatic biota are not adversely affected by the appropriation activity.
- In Pennsylvania, the SHP facilities would cross streams with Cold Water Fisheries (CWF) and High Quality (HQ) designations, and streams with trout stocking designations. EPA encourages ACP and Dominion to consider reasonable route deviations to stream sections listed as CWF and HQ. A proposed access road crosses the upper reaches of Slaty Fork, a Tier 3 stream. Upgraded construction may be appropriate for high quality stream area crossings.
- While the number of waterbodies has been reduced, the ACP would still cross 17 waterbodies listed on the National Rivers Inventory (NRI). EPA encourages ACP and Dominion to consider reasonable route deviations to stream sections not listed in the NRI, and upgraded construction for high quality stream area crossings.

4) Cumulative Impacts

EPA recommends that additional analysis of cumulative impacts be provided in the final EIS. The DEIS considers the impacts of other projects in the action area using HUC 10 watersheds crossed by the proposed project. However, the DEIS analysis considers all 73 HUC 10 watersheds in the aggregate, concluding for example that the projects will have 0.1 percent of the surface water impacts to more than 8.2 million acres across 73 HUC 10 watersheds. This analysis could be strengthened by performing a cumulative impact assessment at the individual watershed scale, i.e., by individual HUC. This would also complement the analysis of groundwater at a state scale, and the DEIS conclusions that cumulative effects on groundwater would be less than significant.

In addition, we recommend the final EIS cumulative impact analysis consider two additional categories of impacts -- stream crossings and water withdrawals -- as these will likely have more impact to surface waters than acres disturbed. Other discussed environmental variables that may influence cumulative impacts at a watershed level include miles of impaired streams, occurrence of rare or at-risk

species, and number of National Pollutant Discharge Elimination System outfalls in the HUC. This information would sharpen the disclosure of cumulative impacts and appropriate consideration of mitigation.

Below is an example of a methodology used to assess the cumulative impact of stream crossings. The methodology assessed the number of stream crossings per HUC10 for the ACP and FERC-jurisdictional natural gas pipeline projects (MVP, WB XPress, Rover, Mountaineer XPress, and Leach XPress). The following tables provide a list of the most highly impacted HUCs.

	HUC 10	Name	# of stream crossings
1	503020104	Headwaters Middle Island Creek	58
2	208020201	Calfpasture River	51
3	503020102	Fishing Creek	35
4	301020112	Mill Creek-Nottoway River	33
5	208020707	Deep Creek	32

	HUC 12	Name	# of Stream Crossings
1	20802080203	Deep Creek-Southern Branch Elizabeth River	31
2	30102011206	Round Gut-Nottoway River	26
3	20700050703	Inch Branch-Back Creek	19
4	50302010402	Buckeye Creek	19
5	20802020104	Hamilton Branch	15
6	20802070701	Little Creek-Deep Creek	15
7	30102010501	Butterwood Creek	15

This type of assessment, coupled with known attributes of watersheds, would indicate areas of special concern, such as Inch Branch-Back Creek and the Headwaters Middle Island Creek, which are impaired for benthic macroinvertebrates and have high numbers of stream crossings. Some of these headwaters also are critical for downstream Federally-listed endangered freshwater mussels, such as the snuffbox and clubshell. These areas could potentially be avoided through minor route modifications, where practicable.

