ATLANTIC COAST PIPELINE, LLC
ATLANTIC COAST PIPELINE

and

DOMINION ENERGY TRANSMISSION, INC.
SUPPLY HEADER PROJECT

Supplemental Filing
July 28, 2017

APPENDIX G

Correspondence for the Atlantic Coast Pipeline

APPENDIX G

Supplemental Summary of Public Agency Correspondence for the Atlantic Coast Pipeline

Agency/Contact Name(s)	Date of Correspondence	Format	Description
MULTIPLE AGENCIES			
Chickahominy Indian Tribe, Nottoway Tribe of Virginia, Pamunkey Indian Tribe, Upper Mattaponi Indian Tribe, Cheroenhaka (Nottoway) Indian Tribe, Mattaponi Indian Tribe, Monacan Indian Nation			
Stephen Adkins, Lynette Allston, Robert Gray, Frank Adams, Beverly El, Lois Custalow, Teresa Pollak	5/3/17	Minutes	Meeting to discuss the project and associated topics, such as safety, inspections, restoration, cultural resources, and tribal consultation.
Virginia Department of Game and Inland Fisheries, U.S. Forest Service – George Washington National Forest			
Amy Ewing, Troy Morris	7/20/17	Letter	Transmittal of Mabee's Salamander and Tiger Salamander Survey Report for Virginia.
Amy Ewing, Troy Morris	7/21/17	Letter	Transmittal of Small Mammal Habitat Survey Report for Virginia.
U.S. Fish and Wildlife Service – West Virginia Field Office, U.S. Forest Service, West Virginia Division of Natural Resources			
Liz Stout, Cliff Brown, Kent Karriker	7/26/17	Letter	Transmiittal of Plant Survey Report for West Virginia, including the MNF.
FEDERAL AGENCIES			
National Park Service			
John McDade	7/17/17	Letter	Transmittal of Phase I Archaeological Survey Report for the Blue Ridge Parkway Crossing and Visual Impact Assessment Report.[1]
U.S. Fish and Wildlife Service – West Virginia Field Office			
Liz Stout	7/26/17	Letter	Transmittal of Bat Survey Report for the MNF.
U.S. Fish and Wildlife Service – Virginia Field Office			
Troy Anderson	7/26/17	Letter	Transmittal of Bat Survey Report for the GWNF.
U.S. Fish and Wildlife Service – West Virginia and Virginia Field Offices			
Liz Stout, Troy Anderson	7/26/17	Letter	Transmittal of Small Whorled Pogonia Conservation Plan.
U.S. Fish and Wildlife Service – North Carolina Field Office			
John Ellis	7/26/17	Letter	Transmittal of Bat Survey Report for North Carolina.
John Ellis	7/28/17	Letter	Transmittal of Rare Plant Survey Report for North Carolina.
U.S. Forest Service – Monongahela National and George Washington National Forests			
Jennifer Adams	6/15/17	Letter	Transmittal of Phase I Archaeology Addendum 1 Survey Report for the MNF.
Kent Karriker	7/11/17	Letter	Transmittal of Allegheny Woodrat and Timber Rattlesnake Survey Report for the MNF.
Troy Morris	7/11/17	Letter	Letter regarding timber rattlesnake surveys in the GWNF.
Troy Morris	7/11/17	Letter	Transmittal of Post-Construction Macroinvertebrate Survey Monitoring Plan.
Troy Morris	7/20/17	Letter	Transmittal of Insect Habitat Assessment and Survey Report for the GWNF.
Troy Morris	7/21/17	Letter	Transmittal of American Ginseng Relocation Plan.
Troy Morris	7/26/17	Letter	Transmittal of Myriapod/Gastropod Survey Report for GWNF.
U.S. Forest Service – Southern Region			
Timothy Abing	6/30/17	Letter	Responses to Forest Service Comments on the COM Plan.

APPENDIX G (CONTINUED)

Supplemental Summary of Public Agency Correspondence for the Atlantic Coast Pipeline

Agency/Contact Name(s)	Date of Correspondence	Format	Description
STATE/COMMONWEALTH AGENCIES			
WEST VIRGINIA AGENCIES			
West Virginia Division of Culture and History			
Susan Pierce	6/15/17	Letter	Comments on Phase I Archaeological Survey Season 5 Report.
Susan Pierce	7/18/17	Letter	Transmittal of Cemetery Protective Treatment Plan.
Susan Pierce	7/27/17	Letter	Transmittal of Phase I Architectural Survey Addendum 5 Report (revised).
Susan Pierce	7/27/17	Letter	Transmittal of Aboveground Structures Cultural Resources Assessment of Effects Report.
West Virginia Division of Natural Resources			
Richard Bailey	5/22/17	Emails	Concurrence with rookery conservation measures.
Cliff Brown	6/27/17	Letter	Transmittal of Protected Snake Conservation Plan. [b]
VIRGINIA AGENCIES			
Virginia Department of Conservation and Recreation			
Jason Bulluck, Rene Hypes	7/11/17	Letter	Transmittal of Emporia Powerline Bog and Handsom-Gum Powerline Conservation Sites Mitigation Plan.
Virginia Department of Game and Inland Fisheries			
Amy Ewing	5/1/17	Email	Email regarding rookery conservation measures.
Amy Ewing	7/28/17	Letter	Update/follow-up on rookery conservation measures.
Virginia Department of Historic Resources			
Roger Kirchen	5/26/17	Letter	Comments on Phase 1 Architectural Survey Report Addendum 2.
Roger Kirchen	6/9/17	Letter	Comments on Phase I Archaeological Survey Report Addendum 4.
Blake McDonald	6/14/17	Letter	Transmittal of supplemental items for the Phase I Architectural Survey Report Addendum 5.
Roger Kirchen	6/14/17	Letter	Transmittal of supplemental items for the Phase I Architectural Survey Report Addendum 6.
Roger Kirchen	6/14/17	Letter	Comments on Phase 1 Architectural Survey Addendum 3 Report.
Roger Kirchen	6/14/17	Letter	Comments on Phase 1 Architectural Survey Addendum 4 Report.
Roger Kirchen	6/28/17	Letter	Transmittal of Phase 1 Architectural Survey Report Addendum 2 Report (revised).
Roger Kirchen	7/7/17	Letter	Comments on Phase I Archaeological Survey Addendum 5 Report.
Roger Kirchen	7/11/17	Letter	Transmittal of Phase 1 Architectural Survey Addendum 5 Report (revised).
Roger Kirchen	7/11/17	Letter	Transmittal of Initial Assessment of Potential Effects Report for Architectural Resources.
Roger Kirchen	7/14/17	Letter	Transmittal of Phase I Architectural Survey Addendum 4 Report (revised).
Roger Kirchen	7/18/17	Letter	Transmittal of Cemetery Protective Treatment Plan.
Roger Kirchen	7/19/17	Letter	Transmittal of Phase I Archaeology Survey Addendum 6 Report.
Roger Kirchen	7/21/17	Letter	Transmittal of Visual Impact Assessment Report. [c]

APPENDIX G (CONTINUED)

Supplemental Summary of Public Agency Correspondence for the Atlantic Coast Pipeline

Agency/Contact Name(s)	Date of Correspondence	Format	Description
Roger Kirchen	7/27/17	Letter	Transmittal of Phase 1 Architectural Survey Addendum 3 Report (revised).
Roger Kirchen	7/27/17	Letter	Transmittal of Aboveground Structures Cultural Resources Assessment of Effects Report.
NORTH CAROLINA AGENCIES			
North Carolina Department of Natural and Cultural Resources			
Renee Gledhill-Earley	2/6/17	Letter	Comments on Phase I Architecture Survey Addendum 3 Report.
Renee Gledhill-Earley	5/5/17	Letter	Comments on Phase I Archaeological Survey Addendum 4 Report.
Ramona Bartos	6/2/17	Letter	Comments on Phase I Architectural Survey Addendum 4 Report.
Ramona Bartos	6/2/17	Letter	Comments on Phase II Site Testing Report.
Renee Gledhill-Earley	6/28/17	Letter	Transmittal of Phase I Architectural Survey Addendum 4 Report (revised).
Renee Gledhill-Earley	6/28/17	Letter	Transmittal of Phase I Architectural Survey Addendum 5 Report.
Renee Gledhill-Earley	7/11/17	Letter	Transmittal of Phase I Archaeology Addendum 5 Report.
Renee Gledhill-Earley	7/18/17	Letter	Transmittal of Cemetery Protective Treatment Plan.
Renee Gledhill-Earley	7/25/17	Letter	Transmittal of Phase II Archaeological Site Testing Report, Sixth Volume.
Renee Gledhill-Earley	7/25/17	Letter	Transmittal of Phase III Research Designs for Archaeological Sites.
Renee Gledhill-Earley	7/27/17	Letter	Transmittal of Aboveground Structures Cultural Resources Assessment of Effects Report.
North Carolina Wildlife Resources Commission			
Gabriela Garrison	5/25/17	Email	Email regarding rookery conservation measures.
Gabriela Garrison	7/28/17	Letter	Update/follow-up on rookery conservation measures.

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[a] The Phase I Archaeological Survey Report for the Blue Ridge Parkway Crossing was previously filed on July 29, 2016 (FERC Accession Number 20160729-5256) and Visual Impact Assessment Report was previously filed on June 9, 2017 (FERC Accession Number 20170609-5196).

[b] The Protected Snake Conservation Plan was previously filed on July 29, 2016 (FERC Accession Number 20160729-5256).

[c] The Visual Impact Assessment Report was previously filed on June 9, 2017 (FERC Accession Number 20170609-5196).

Multiple Agencies

Chickahominy Indian Tribe, Nottoway Tribe of Virginia, Pamunkey Indian Tribe, Upper Mattaponi Indian Tribe, Cheroenhaka (Nottoway) Indian Tribe, Mattaponi Indian Tribe, Monacan Indian Nation

ATLANTIC COAST PIPELINE
PROJECT MEETING MINUTES

MEETING WITH (COMPANY/AGENCY):
Virginia Indian Tribes

DATE:
May 3, 2017

LOCATION:
Providence Forge, VA

ATTENDEES AND THEIR AFFILIATION:
Chief Stephen Adkins, Chickahominy Indian Tribe
Chief Lynette Allston, Nottoway Tribe of Virginia
Chief Robert Gray, Pamunkey Indian Tribe
Chief Frank Adams, Upper Mattaponi Indian Tribe
Beverly El, Cheroenhaka (Nottoway) Indian Tribe
Lois Custalow Carter, Mattaponi Indian Tribe
Teresa Pollak, Monacan Indian Nation
Diane Leopold, Dominion
Leslie Hartz, Dominion
Ann Loomis, Dominion
Molly Plautz, Dominion
Pat Robblee, ERM

PREPARED BY:
Molly Plautz

MEETING MINUTES:

Overview

On May 3, 2017, the Atlantic Coast Pipeline (ACP) team met with members of several Virginia Indian Tribes. Chief Adkins of the Chickahominy Indian Tribe hosted the meeting at the Samaria Baptist Church in Providence Forge, Virginia.

The meeting began with introductions. Diane Leopold provided opening remarks on behalf of Dominion. Several of the tribes asked questions covering topics of safety and inspections, restoration techniques, emissions of natural gas versus other energy sources, construction techniques, and tribal engagement under Section 106 of the National Historic Preservation Act.

Concerns were raised regarding the process for protecting unmarked burial sites. Dominion described the process by which unanticipated finds or burial sites are protected should they be discovered during construction. Several tribes identified demolition of mountaintops or "mountaintop removal" as a potential concern. Diane Leopold and Leslie Hartz confirmed that demolition of mountain tops is not proposed, and following construction of the pipeline ACP is required by federal regulations to fully restore ridgelines to their original contours.

A question was also asked about the timing of tribal participation and whether or not key decisions had already been made regarding the project. Molly Plautz and Pat Robblee explained that while Dominion has almost completed the identification and evaluation phase of the Section 106 process, decisions regarding effects and treatment are yet to be made and tribal participation in these steps would be important and helpful.

After an initial round of questions, Molly Plautz provided an overview presentation and updated the meeting participants on the project timeline, results of cultural surveys and the unanticipated finds plan.

Chief Allston of the Nottoway Tribe of Virginia commented that the areas surrounding the Nottoway and Nansemond Rivers are culturally sensitive. Teresa Pollak with the Monacan Indian Nation asked several questions regarding the environmental impacts of the pipeline.

The ACP team asked the tribes to share any concerns so that they may be addressed.

cc: Presentation

Virginia Department of Game and Inland Fisheries, U.S. Forest Service - George Washington National Forest

Dominion Energy Services, Inc.
5000 Dominion Boulevard,
Glen Allen, VA 23060

July 20, 2017

BY E MAIL

Ms. Amy Ewing
Virginia Department of Game and Inland Fisheries
7870 Villa Park Drive
Henrico, VA 23228

Troy Morris
George Washington National Forest
5162 Valleypointe Parkway
Roanoke, VA 24019

Re: Dominion Transmission, Inc., Atlantic Coast Pipeline
Submittal of Mabee's Salamander (*Ambystoma Mabeei*) and Tiger Salamander (*Ambystoma Tigrinium*) Surveys along the Proposed Atlantic Coast Pipeline Project in Virginia

Dear Ms. Ewing and Mr. Morris:

Atlantic Coast Pipeline, LLC (Atlantic) is pleased to provide the attached report for Mabee's Salamander (*Ambystoma Mabeei*) and Tiger Salamander (*Ambystoma Tigrinium*) surveys along the proposed Atlantic Coast Pipeline Project in Virginia.

This report describes the scope of work, methodologies, and results for Tiger and Mabee's salamander surveys that took place in spring 2017 in locations within Augusta, Nelson, Highland, and Bath Counties and City of Suffolk known to respectively harbor these Virginia state-threatened species.

Tiger Salamander and Mabee's Salamander 2017 surveys occurred between March 14 and May 22. Of the wetland features assessed to determine the presence of suitable habitat for Tiger Salamanders in Augusta, Nelson, Highland, and Bath Counties, 10 locations ranked as moderate potential and one ranked as high. Subsequent trapping at these sites resulted in no larval or adult Tiger Salamander captures. Of the wetland features assessed to determine the presence of suitable habitat for Mabee's Salamanders in City of Suffolk, four locations ranked as moderate potential and none ranked as high. Subsequent trapping at these sites resulted in no adult or larval Mabee's salamanders. Additional surveys will be required during 2018 for second-year trapping at sites that lacked water during 2017 surveys.

Project and Company Background

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Company Gas. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run

local businesses. The underground pipeline project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina. Atlantic has contracted with DTI, a subsidiary of Dominion, to permit, build, and operate the ACP on behalf of Atlantic. The ACP will be regulated by the Federal Energy Regulatory Commission (FERC) under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

We would appreciate your review and concurrence and look forward to continuing to work with you on the ACP. Please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com if there are questions regarding this report. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: Richard Gangle, Dominion
Amy Ewing, Virginia Department of Game and Inland Fisheries
Rick Reynolds, Virginia Department of Game and Inland Fisheries
Jennifer Adams, U.S. Forest Service
Fred Huber, U.S. Forest Service, George Washington National Forest

Attachments:
Mabee's Salamander (*Ambystoma Mabeei*) and Tiger Salamander (*Ambystoma Tigrinium*) Surveys along the Proposed Atlantic Coast Pipeline Project in Virginia

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 21, 2017

BY EMAIL

Amy Ewing
Virginia Department of Game and Inland Fisheries
7870 Villa Park Dr., Suite 400
Henrico, VA 23228

Troy Morris
U.S. Forest Service
George Washington and Jefferson National Forests
5162 Valleypointe Parkway
Roanoke, VA 24019

Re: Dominion Energy Transmission, Inc., Atlantic Coast Pipeline
Habitat Survey Report for Protected Small Mammal Species 2016-2017

Dear Ms. Ewing and Mr. Morris,

On behalf of Atlantic Coast Pipeline, LLC (Atlantic), Dominion Energy is pleased to provide the attached Habitat Survey Report for Protected Small Mammal Species documenting the results of habitat survey in Virginia to the Virginia Department of Game and Inland Fisheries (VDGIF) and GWNF.

During the 2016 and 2017 field seasons, habitat surveys for southern rock vole (*Microtus chrotorrihinus carolinensis*), southern water shrew (*Sorex palustris punctulatus*), American water shrew (*Sorex palustris*), and Alleghany woodrat (*Neotoma magister*) were conducted on the current proposed route of the Atlantic Coast Pipeline (ACP) in Virginia. The survey areas included the 300-foot-wide ACP study corridor, 50-foot proposed access road corridors, and aboveground facilities.

Surveys within the current proposed ACP Project area identified four areas of potential Allegheny woodrat habitat, including two areas containing evidence of Allegheny woodrat presence, six stream channels with potential water shrew habitat, and four areas of potential rock vole habitat. Allegheny woodrat and water shrew habitats were also found in Bath County along access road 36-014.AR3 in September 2016; however, this access road is no longer part of the proposed Project.

Atlantic requests concurrence that the findings described in the attached report are sufficient to determine potential impacts on small mammal suitable habitat in the ACP Project area.

Project and Company Background

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Inc., Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Company Gas. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up

to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The underground pipeline project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina.

Atlantic has contracted with Dominion Energy Transmission, Inc., a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic. For more information about the ACP, visit the company's website at www.atlanticcoastpipeline.com. The ACP will be regulated by the Federal Energy Regulatory Commission (FERC) under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

Atlantic looks forward to coordinating with you on this project. Please contact Mr. Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding this information. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: Richard B. Gangle, Dominion Energy
Jennifer Adams, U.S. Forest Service George Washington National Forest
Steve Croy, U.S. Forest Service George Washington National Forest
Carol Croy, U.S. Forest Service George Washington National Forest
Rick Reynolds, Virginia Department of Game and Inland Fisheries

Attachments:
Habitat Survey Report for Protected Small Mammal Species 2016-2017

U.S. Fish and Wildlife Service - West Virginia Field Office, U.S. Forest Service, West Virginia Division of Natural Resources

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 26, 2017

BY EMAIL

Liz Stout
U.S. Fish and Wildlife Service
694 Beverly Pike
Elkins, WV 26241

Cliff Brown
West Virginia Division of Natural Resources
P.O. Box 67 – Ward Road
Elkins, WV 26241

Kent Karriker
Monongahela National Forest
200 Sycamore Street
Elkins, WV 26241

Re: Dominion Energy Transmission, Inc., Atlantic Coast Pipeline
Submittal of 2017 West Virginia Botanical Survey Report

Dear Ms. Stout, Mr. Brown, and Mr. Karriker,

On behalf of Atlantic Coast Pipeline, LLC (Atlantic), Dominion Energy Transmission, Inc. (DETI) is pleased to provide the attached 2017 West Virginia Botanical Survey Report documenting the results to date of presence/ probable absence plant surveys within the current ACP Project area in West Virginia.

Botanical surveys were conducted within the 300-foot-wide ACP study corridor, 50-foot-wide access road corridors, and within aboveground facility footprints between February and July 2017 in areas containing habitat potentially suitable to three federally listed species: running buffalo clover (*Trifolium stoloniferum*), small whorled pogonia (*Isotria medeoloides*), and Virginia spiraea (*Spiraea virginiana*). Surveys within the Monongahela National Forest (MNF) were conducted in June 2017 and included an expanded list of 61 Regional Forester's Sensitive Species (RFSS). Surveys during the 2017 field season followed the methodologies described in the approved 2016 West Virginia Botanical Survey Study Plan.

Occurrences of federally listed running buffalo clover and small whorled pogonia were discovered within or adjacent to the Project area during the 2016 botanical surveys; additional occurrences of running buffalo clover were also found within the Project area during the 2017 botanical surveys.

A total of nine state-listed plant species were identified within the study corridor during surveys in 2016 and 2017: Roan Mountain sedge (*Carex roanensis*), Appalachian oakfern (*Gymnocarpium appalachianum*), white alumroot (*Heuchera alba*), summer sedge (*Carex aestivalis*), brome-like sedge (*Carex bromoides ssp. bromoides*), white walnut (*Juglans cinerea*), heartleaf hedgenettle (*Stachys cordata*), bashful bulrush (*Trichophorum planifolium*), and hairyfruit sedge (*Carex trichocarpa*). Populations of RFSS listed Roan Mountain sedge, Appalachian oakfern, and white alumroot were also found on MNF lands.

Atlantic will continue to work towards avoidance and minimization of impacts to these species, in coordination with the MNF, USFWS, and West Virginia Division of Natural Resources.

Project and Company Background

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Inc., Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Company Gas. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The underground pipeline project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina.

Atlantic has contracted with DETI, a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic. For more information about the ACP, visit the company's website at www.atlanticcoastpipeline.com. The ACP will be regulated by the Federal Energy Regulatory Commission (FERC) under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

Atlantic looks forward to coordinating with you on this project. Please contact Mr. Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding this information. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: Richard B. Gangle, Dominion Energy
Jennifer Adams, U.S. Forest Service
Whitney Bailey, Monongahela National Forest
P.J. Harmon, West Virginia Division of Natural Resources

Attachments:
2017 West Virginia Botanical Survey Report

Federal Agencies

National Park Service

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 17, 2017

John McDade
Cultural Resources Manager
Blue Ridge Parkway
828-348-3438
199 Hemphill Knob Road
Asheville, NC 28803

Subject: Final Phase I Archaeological Survey Report for the Blue Ridge Parkway Crossing, Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project ARPA Permit #BLRI-2015-01

Dear Mr. McDade:

Ms. Mary Krueger, Energy Specialist with the National Park Service, has requested that 11 copies each of the above-referenced archaeological survey report and visual impact assessment report be sent to your attention. They are enclosed.

If you have any questions, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

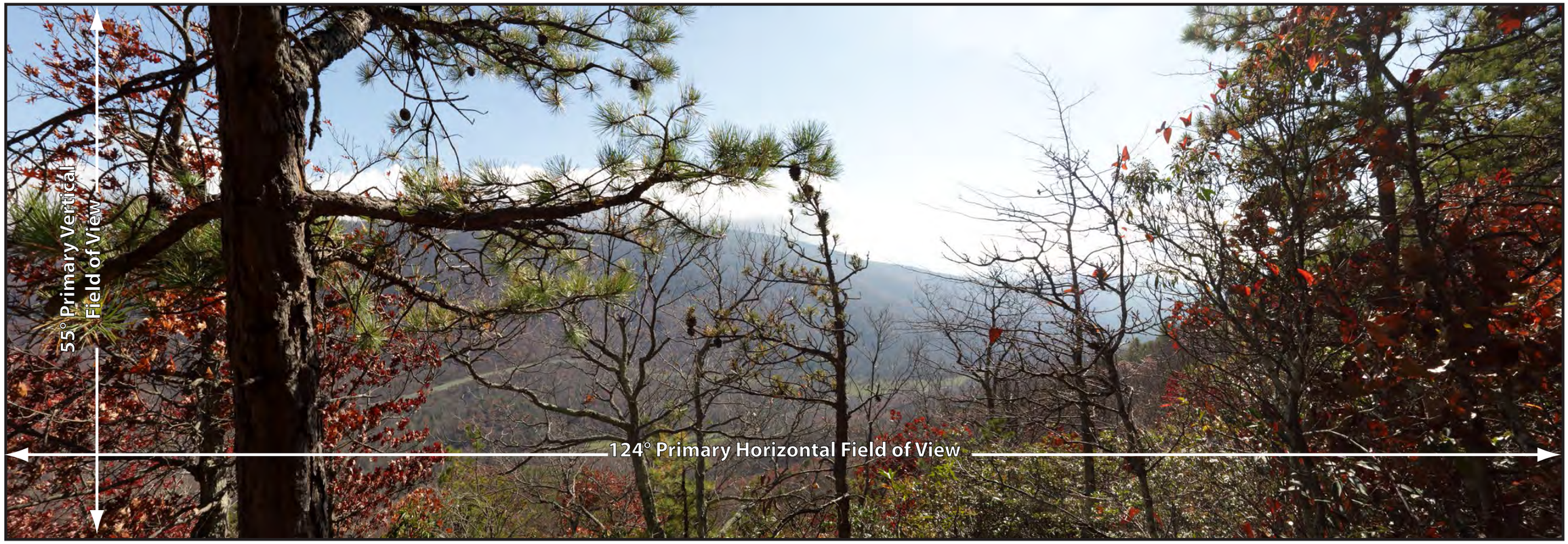
Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)
Ann Loomis (Dominion Energy)
Mary Krueger (National Park Service)

Enclosure: **Final Phase I Archaeological Survey Report for the Atlantic Coast Pipeline Project: Blue Ridge Parkway Visual Impact Assessment Report**

TrueView™ Printing and Viewing Guidelines

Truescape®



A TrueView™ is a high-resolution photo simulation that has been developed with survey grade accuracy, and represents the 'Primary Human Field of View'. The TrueView™ depicts how the proposed project will look when viewed from the exact photo point position under the same light and atmospheric conditions as those experienced at time of photography.

How to view a TrueView™
The TrueView™ has been developed to be viewed on a specifically sized printed sheet (66.8 inches by 23.9 inches paper size) standing at a distance of 19.7 inches from the image. Accurate visual assessments should always be made from the full-sized printed version of the TrueView™ rather than reduced size booklets or digital devices.

Viewing on digital devices
When viewing a TrueView™ on digital devices please confirm that the scale bar located in the bottom-right corner of the TrueView™ is scaled to four inches wide and then the image viewed from a distance of 19.7 inches. This ensures that the portion of the TrueView™ visible on the screen is a true to scale representation.

Important
If the scale bar is not adjusted to four inches on your screen, and if the image is not viewed at a distance of 19.7 inches then the TrueView™ image displayed will either overstate or understate how the project will look from the photo point position.

U.S. Fish and Wildlife Service - West Virginia Field Office

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 26, 2017

BY EMAIL

Ms. Liz Stout
U.S. Fish and Wildlife Service
West Virginia Ecological Services Field Office
694 Beverly Pike
Elkins, WV 26241

Re: Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline
Submittal of Monongahela National Forest Protected Bat Species Year 3 Presence/Likely Absence Survey Report

Dear Ms. Stout,

On behalf of Atlantic Coast Pipeline, LLC (Atlantic), Dominion Energy is pleased to provide the attached Atlantic Coast Pipeline (ACP) Monongahela National Forest Protected Bat Species Year 3 Presence/Likely Absence Survey Report. The report describes survey methodologies and results of surveys for protected bat species within the ACP Project area within the Monongahela National Forest (MNF) in West Virginia.

Field surveys were completed in 2015, 2016, and 2017 to determine presence or likely absence of protected bat species within the proposed ACP, including the 300-foot-wide survey corridor, 50-foot-wide access road corridors, and aboveground facility footprints in the MNF in West Virginia. Acoustic surveys and mist net surveys were conducted to address the federally listed Indiana bat (*Myotis sodalis*), gray bat (*Myotis grisescens*), Virginia big-eared bat (*Corynorhinus townsendii virginianus)*, and northern long-eared bat (*Myotis septentrionalis*) and the MNF Regional Forester's Sensitive Species (RFSS), including the little brown bat (*Myotis lucifugus*), eastern small-footed bat (*Myotis leibii*), and tri-colored bat (*Perimyotis subflavus*).

Presence/likely absence surveys completed through Summer 2015 were reported in the West Virginia Segment Protected Bat Species Presence/Probable Absence Survey Report filed with the Federal Energy Regulatory Commission (FERC) on November 13, 2015. Surveys completed through Summer 2016 were reported in the West Virginia Segment Protected Bat Species Year 2 Presence/Probable Absence Survey Report filed with FERC on October 14, 2016. Additional survey efforts undertaken in Summer 2017 are included in this report.

Atlantic is requesting your review and concurrence of the attached report, which is based on the results of bat surveys to date on the ACP within the MNF in West Virginia.

Project and Company Background

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Inc., Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Company Gas. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The underground pipeline project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina.

Atlantic has contracted with Dominion Energy Transmission, Inc., a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic. For more information about the ACP, visit the company's website at www.atlanticcoastpipeline.com. The ACP will be regulated by the FERC under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

Atlantic looks forward to coordinating with you on this project. Please contact Mr. Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding this information. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: Richard B. Gangle, Dominion Energy
Craig Stihler, West Virginia Division of Natural Resources
Clifford Brown, West Virginia Division of Natural Resources
Kent Karriker, U.S. Forest Service Monongahela National Forest
Jennifer Adams, U.S. Forest Service George Washington National Forest

Attachments:
Monongahela National Forest Protected Bat Species Year 3 Presence/Likely Absence Survey Report

U.S. Fish and Wildlife Service - Virginia Field Office

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 26, 2017

BY EMAIL

Mr. Troy Anderson
U.S. Fish and Wildlife Service
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061

Re: Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline
Submittal of George Washington National Forest Protected Bat Species Year 3 Presence/Likely Absence Survey Report

Dear Mr. Anderson,

On behalf of Atlantic Coast Pipeline, LLC (Atlantic), Dominion Energy is pleased to provide the attached Atlantic Coast Pipeline (ACP) George Washington National Forest Protected Bat Species Year 3 Presence/Likely Absence Survey Report. The report describes survey methodologies and results of surveys for protected bat species within the ACP Project area within the George Washington National Forest (GWNF) in Virginia.

Field surveys were completed in 2015, 2016, and 2017 to determine presence or likely absence of protected bat species within the proposed ACP, including the 300-foot-wide survey corridor, 50-foot-wide access road corridors, and aboveground facility footprints in the GWNF in Virginia. Acoustic surveys and mist net surveys were conducted to address the federally listed Indiana bat (*Myotis sodalis*), gray bat (*Myotis grisescens*), Virginia big-eared bat (*Corynorhinus townsendii virginianus*), and northern long-eared bat (*Myotis septentrionalis*), the state-listed little brown bat (*Myotis lucifugus*), Rafinesque's big-eared bat (*Corynorhinus rafinesquii),* and tri-colored bat (*Perimyotis subflavus*), and the GWNF Occurrence Analysis Results (OAR) species eastern small-footed bat (*Myotis leibii).*

Presence/likely absence surveys completed through Summer 2015 were reported in the Virginia Segment Protected Bat Species Presence/Probable Absence Survey Report filed with the Federal Energy Regulatory Commission (FERC) on November 13, 2015. Surveys completed through Summer 2016 were reported in the Virginia Segment Protected Bat Species Year 2 Presence/Probable Absence Survey Report filed with FERC on October 17, 2016. Additional survey efforts undertaken in Summer 2017 are included in this report.

Atlantic is requesting your review and concurrence of the attached report, which is based on the results of bat surveys to date on the ACP within the GWNF in Virginia.

Project and Company Background

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Inc., Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Company Gas. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The underground pipeline project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina.

Atlantic has contracted with Dominion Energy Transmission, Inc., a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic. For more information about the ACP, visit the company's website at www.atlanticcoastpipeline.com. The ACP will be regulated by the FERC under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

Atlantic looks forward to coordinating with you on this project. Please contact Mr. Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding this information. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: Richard B. Gangle, Dominion Energy
Amy Ewing, Virginia Department of Game and Inland Fisheries
Troy Morris, U.S. Forest Service George Washington National Forest
Jennifer Adams, U.S. Forest Service George Washington National Forest

Attachments:
George Washington National Forest Protected Bat Species Year 3 Presence/Likely Absence Survey Report

U.S. Fish and Wildlife Service - West Virginia and Virginia Field Offices

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 26, 2017

BY EMAIL

Ms. Liz Stout
U.S. Fish and Wildlife Service
West Virginia Ecological Services Field Office
Elkins, WV 26241

Troy Anderson
U.S. Fish and Wildlife Service
6669 Short Lane
Gloucester, VA 23061

Re: Dominion Energy Transmission, Inc., Atlantic Coast Pipeline, LLC
Submittal of Small Whorled Pogonia Conservation Plan

Dear Ms. Stout and Mr. Anderson:

On behalf of Atlantic Coast Pipeline, LLC (Atlantic), Dominion Energy Transmission, Inc. is pleased to provide the attached Atlantic Coast Pipeline (ACP) Small Whorled Pogonia Conservation Plan. The plan describes Atlantic's proposed conservation measures to address the potential for indirect impacts to federally threatened small whorled pogonia (*Isotria medeoloides*) populations adjacent to the Project area in West Virginia and Virginia.

The Biological Assessment (ERM, 2017) has preliminarily projected that ACP may affect, and is likely to adversely affect four small whorled pogonia populations located outside the ACP Project workspace. Because no populations occur within the Project workspace, no small whorled pogonia will be directly affected by ACP construction; however, indirect impacts due to habitat alterations and erosion are possible. The conservation measures described in the attached Small Whorled Pogonia Conservation Plan are intended to reduce and mitigate potential Project impacts to this species.

Atlantic is requesting your review and concurrence of the attached conservation plan, which is based on the results of botanical surveys to date and proposed conservation measures provided for the ACP in West Virginia and Virginia.

Project and Company Background

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Inc. (Dominion Energy), Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern

Company Gas. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The Project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina. Atlantic has contracted with Dominion Energy Transmission, Inc., a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic. The ACP will be regulated by Federal Energy Regulatory Commission (FERC) under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

Atlantic looks forward to coordinating with you on this Project. Please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dom.com, if there are questions regarding this information. Please direct written responses to:

Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: Richard B. Gangle, Dominion
Kent Karriker, U.S. Forest Service Monongahela National Forest
Troy Morris, U.S. Forest Service George Washington National Forest
Jennifer Adams, U.S. Forest Service George Washington National Forest
Cliff Brown, West Virginia Division of Natural Resources

Attachments:
Small Whorled Pogonia Conservation Plan

U.S. Fish and Wildlife Service - North Carolina Field Office

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 26, 2017

BY EMAIL

Mr. John Ellis
U.S. Fish and Wildlife Service
North Carolina Ecological Services Field Office
P.O. Box 33726
Raleigh, NC 27636

Re: Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline
Submittal of North Carolina Segment Protected Bat Species Year 3
Presence/Likely Absence Survey Report

Dear Mr. Ellis,

On behalf of Atlantic Coast Pipeline, LLC (Atlantic), Dominion Energy is pleased to provide the attached Atlantic Coast Pipeline (ACP) North Carolina Segment Protected Bat Species Year 3 Presence/Likely Absence Survey Report. The report describes survey methodologies and results of surveys for protected bat species within the ACP Project area in North Carolina.

Field surveys were completed in 2015, 2016, and 2017 to determine presence or likely absence of protected bat species within the proposed ACP, including the 300-foot-wide survey corridor, 50-foot-wide access road corridors, and aboveground facility footprints in North Carolina. Acoustic surveys and mist net surveys were conducted to address the federally listed Indiana bat (*Myotis sodalis*), and northern long-eared bat (*Myotis septentrionalis*), as well as state-listed endangered bats including Rafinesque's big-eared bat (*Corynorhinus rafinesquii)* and southeastern myotis (*Myotis austroriparius)*.

Presence/likely absence surveys completed through Summer 2015 were reported in the North Carolina Segment Protected Bat Species Presence/Probable Absence Survey Report filed with the Federal Energy Regulatory Commission (FERC) on November 13, 2015. Surveys completed through Summer 2016 were reported in the North Carolina Segment Protected Bat Species Year 2 Presence/Probable Absence Survey Report filed with FERC on October 17, 2016. Additional survey efforts undertaken in Summer 2017 are included in this report.

Atlantic is requesting your review and concurrence of the attached report, which is based on the results of bat surveys to date on the ACP in North Carolina.

Project and Company Background

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Inc., Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Company Gas. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The underground pipeline project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina.

Atlantic has contracted with Dominion Energy Transmission, Inc., a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic. The ACP will be regulated by the FERC under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

Atlantic looks forward to coordinating with you on this project. Please contact Mr. Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding this information. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: Richard B. Gangle, Dominion Energy
Gabriela Garrison, North Carolina Wildlife Resources Commission

Attachments:
North Carolina Segment Protected Bat Species Year 3 Presence/Likely Absence Survey Report

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 28, 2017

BY EMAIL

John Ellis
U.S. Fish and Wildlife Service
Raleigh Ecological Services Field Office
P.O. Box 33726
Raleigh, NC 27636

Re: Dominion Energy Transmission, Inc., Atlantic Coast Pipeline
Submittal of 2017 North Carolina Rare Plant Survey Report

Dear Mr. Ellis,

On behalf of Atlantic Coast Pipeline, LLC (Atlantic), Dominion Energy Transmission, Inc. is pleased to provide the attached 2017 North Carolina Rare Plant Survey Report documenting the results to date of presence/probable absence plant surveys within the current Atlantic Coast Pipeline (ACP) Project area in North Carolina.

Botanical surveys were conducted within the 300-foot-wide ACP study corridor, 50-foot-wide access road corridors, and within aboveground facility footprints between February and July 11, 2017 in areas containing habitat potentially suitable for four federally listed species: American chaffseed (*Schwalbea americana*), Michaux's sumac (*Rhus michauxii*), pondberry (*Lindera melissifolia*), and rough-leaved loosestrife (*Lysimachia asperulaefolia*). Surveys for 19 additional state-listed or state rare plant species were requested by the North Carolina Department of Environment and Natural Resources (NCDENR) in 2015. As in 2015 and 2016, surveys for these 19 species were documented in the Project area if encountered during surveys for the 4 federally listed plant species.

Surveys during the 2017 field season followed the methodologies described in the 2016 North Carolina Rare Plant Survey Study Plan, which was approved by the U.S. Fish and Wildlife Raleigh Field Office (USFWS) on May 18, 2016 and the Michaux's sumac alternative winter survey methodology approved by the USFWS on July 5, 2017.

No new occurrences of federally listed, state-listed, or state rare species were encountered through July 11, 2017. A total of three habitat polygons currently within the ACP Project area were not evaluated through July 11, 2017 due to lack of access permission. These areas, along with suitable habitat identified within route changes in North Carolina occurring after July 11, 2017 will be evaluated at a later date and surveyed during the appropriate survey periods.

Atlantic will continue to work towards avoidance and minimization of impacts to identified sensitive species, in coordination with the USFWS and NCDENR.

Project and Company Background

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Inc., Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Company Gas. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The underground pipeline project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina.

Atlantic has contracted with Dominion Energy Transmission, Inc., a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic. For more information about the ACP, visit the company's website at www.atlanticcoastpipeline.com. The ACP will be regulated by the Federal Energy Regulatory Commission (FERC) under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

Atlantic looks forward to coordinating with you on this project. Please contact Mr. Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding this information. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: Richard B. Gangle, Dominion Energy
Allison Weakley, North Carolina Department of Environment and Natural Resources

Attachments:
2017 North Carolina Rare Plant Survey Report

U.S. Forest Service – Monongahela and George Washington National Forests

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

June 15, 2017

BY OVERNIGHT (OR EXPRESS) MAIL

Ms. Jennifer Adams
U.S. Forest Service
5162 Valleypointe Parkway
Roanoke, Virginia 24019

Subject: Dominion Energy Transmission, Inc., Atlantic Coast Pipeline: Submittal of Technical Report; Addendum 1, Phase I Cultural Resources Investigation of Additional Access Roads and Workspace, Monongahela National Forest, Pocahontas County, West Virginia

Dear Ms. Adams:

On July 27, 2016, Dominion Energy Transmission, Inc. submitted to the Monongahela National Forest (MNF) a Phase I Cultural Resources Investigation report for the Atlantic Coast Pipeline, LLC (Atlantic) Atlantic Coast Pipeline (ACP) Project. Subsequent to that report, additional workspaces and an access road were added to the Project. Between April 17 and June 5, 2017, GAI Consultants, Inc. (GAI) conducted addendum Phase I archaeological investigations and historic architectural reconnaissance for those portions of the proposed Project that lie within the MNF and were not included in previous reports. It is this study that is the subject of the enclosed addendum report.

Phase I addendum archaeological survey and historic architectural reconnaissance resulted in no identification of cultural resources. Therefore, GAI recommends that the Project should be allowed to proceed as planned without further cultural resources investigation. If design plans change to incorporate areas not addressed in the current study or previous reports, additional cultural resources investigations may be required, in accordance with Section 106 of the National Historic Preservation Act.

Atlantic is requesting your review and concurrence of the enclosed technical report presenting the addendum cultural resources studies and results in the MNF.

We look forward to continuing to work with you on the ACP. Please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding this report. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: Gavin Hale (George Washington National Forest)
Richard B. Gangle (Dominion Energy)

Enclosure: Technical Report, Addendum 1, Atlantic Coast Pipeline Project, Phase I Cultural Resources Investigation of Additional Access Roads and Workspace, Monongahela National Forest, Pocahontas County, West Virginia.

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 11, 2017

BY EMAIL

Kent Karriker
U.S. Forest Service
Monongahela National Forest
200 Sycamore Street
Elkins, WV 26241

Re: Dominion Energy Transmission, Inc., Atlantic Coast Pipeline
Alleghany Woodrat and Timber Rattlesnake Survey Report Monongahela National Forest 2016-2017

Dear Mr. Karriker,

On behalf of Atlantic Coast Pipeline, LLC (Atlantic), Dominion Energy is pleased to provide the attached Alleghany Woodrat and Timber Rattlesnake Survey Report for the Monongahela National Forest (MNF) describing the survey scope, methods, and the results of the survey implemented to identify Allegheny woodrat (*Neotoma magister*) and timber rattlesnake (*Crotalus horridus*) habitat and species presence – probable absence in proposed 300-foot-wide Atlantic Coast Pipeline (ACP) study corridor and 50-foot-wide access road study corridors within the MNF in West Virginia. This survey's scope and proposed survey locations were submitted in a study plan that was approved by U.S. Forest Service (USFS) MNF personnel on May 16, 2016.

In May 2016 and April and May 2017, field surveys were conducted on approximately 6.0 miles of the mainline study corridor and approximately 8.4 miles of access roads within the MNF. During surveys in 2016, two rock formations (Rock Outcrops 01 and 02) containing moderately and highly suitable Allegheny woodrat habitat were located adjacent to access road 05-001-C009.AR1/Forest Road 1026 near Buzzard Ridge. After a thorough site inspection, multiple Allegheny woodrat latrines and a possible food cache were located at these sites. Rock Outcrop 06, located on Cloverlick Mountain (Survey Area 02) was also identified as providing low suitability Allegheny woodrat habitat. Additional habitat surveys and live-trapping were conducted in the vicinity of Rock Outcrop 06 per comments provided by the USFS (received August 18, 2016); however, no Allegheny woodrats were captured during live-trapping.

No timber rattlesnake denning or gestating habitat was observed within the MNF portion of the study corridors; however, denning and gestating habitat were located 1.5 miles southwest of the Project corridor on Michael Mountain within Seneca State Forest, which adjoins the MNF. In addition, open patches of rock near the southeast summit of Gibson Knob located beyond the

MNF boundary, but within the Study Corridor, may also provide suitable habitat for shedding or mating snakes during the summer months.

The survey report includes comprehensive results for surveys conducted in 2016 and 2017; no additional surveys are planned for the Allegheny woodrat or timber rattlesnake within the MNF. Atlantic requests concurrence that the findings described in the attached report are sufficient to determine potential impacts on Allegheny woodrats and timber rattlesnakes in the MNF portion of the ACP Project area.

Project and Company Background

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Inc., Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Company Gas. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The underground pipeline project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina.

Atlantic has contracted with Dominion Energy Transmission, Inc., a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic. For more information about the ACP, visit the company's website at www.atlanticcoastpipeline.com. The ACP will be regulated by the Federal Energy Regulatory Commission (FERC) under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

Atlantic looks forward to coordinating with you on this project. Please contact Mr. Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding this information. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: Richard B. Gangle, Dominion Energy
Craig Stihler, West Virginia Department of Natural Resources
Cliff Brown, West Virginia Department of Natural Resources
Cathy Johnson, Monongahela National Forest

Attachments:

Alleghany Woodrat and Timber Rattlesnake Survey Report Monongahela National Forest 2016-2017

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 11, 2017

BY EMAIL

Troy Morris
U.S. Forest Service
George Washington and Jefferson National Forests
5162 Valleypointe Parkway
Roanoke, VA 24019

Re: Dominion Energy Transmission, Inc., Atlantic Coast Pipeline
Habitat Survey for Timber Rattlesnake in the George Washington National Forest

Dear Mr. Morris,

During a July 2016 meeting with George Washington National Forest (GWNF), U.S. Forest Service (USFS) staff requested timber rattlesnake (*Crotalus horridus*) surveys within the GWNF. The principle surveyor's qualifications were also approved at that time, and the survey's scope, methodology, and proposed survey locations were submitted in a study plan that was approved by GWNF personnel on August 26, 2016.

On behalf of Atlantic Coast Pipeline, LLC (Atlantic), Dominion Energy submitted the Timber Rattlesnake Survey Report in the GWNF for review and approval on September 20, 2016. The report describes the scope, methods, and results of the survey implemented to identify timber rattlesnake habitat and species presence – probable absence within the proposed 300-foot-wide Atlantic Coast Pipeline (ACP) study corridor and 50-foot-wide access road study corridors within the GWNF in Virginia.

A desktop habitat assessment was completed in Summer 2016 and field surveys were conducted between August 15 and August 17, 2016 at potentially suitable habitat areas identified during the desktop analysis. No timber rattlesnakes, signs of use, or gestating habitat were found during field surveys within the 300-foot-wide study corridor in 2016; however, potentially suitable denning habitat was found within the corridor at two locations. One potential denning habitat was located on a ridgetop between Lick Draft and Erwin Draft in Highland County, and a second was located along the southeastern slope of Jack Mountain in Bath County. These areas were of low quality and not considered significant habitat.

Proposed and adopted changes to the ACP Project area including route adjustments and access roads were assessed for potential timber rattlesnake habitat in Summer 2017, according to the methodologies described in the previously approved study plan. Surveyors did not identify any additional habitats requiring field survey and, as a result, no additional field surveys were completed in 2017.

The 2016 survey report includes comprehensive results for surveys conducted in 2016; no additional surveys are planned for the timber rattlesnake within the GWNF. Atlantic requests concurrence that the findings described in the 2016 report are sufficient to determine potential impacts on timber rattlesnake habitat in the GWNF portion of the ACP Project area.

Project and Company Background

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Inc., Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Company Gas. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The underground pipeline project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina.

Atlantic has contracted with Dominion Energy Transmission, Inc., a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic. For more information about the ACP, visit the company's website at www.atlanticcoastpipeline.com. The ACP will be regulated by the Federal Energy Regulatory Commission (FERC) under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

Atlantic looks forward to coordinating with you on this project. Please contact Mr. Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding this information. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: Richard B. Gangle, Dominion Energy
Jennifer Adams, U.S. Forest Service George Washington National Forest
Steve Croy, U.S. Forest Service George Washington National Forest
Carol Croy, U.S. Forest Service George Washington National Forest
Amy Ewing, Virginia Department of Game and Inland Fisheries

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 11, 2017

BY EMAIL

Mr. Troy Morris
George Washington National Forest
5162 Valleypointe Parkway
Roanoke, Virginia 24019

Re: Atlantic Coast Pipeline Project
Submittal of Post-Construction Benthic Macroinvertebrate Survey Monitoring Plan

Dear Mr. Morris,

The George Washington National Forest (GWNF) requested a baseline benthic macroinvertebrate survey and a subsequent survey after construction of the proposed Atlantic Coast Pipeline (ACP or Project) in order to determine if the benthic community would be impacted by habitat modifications (e.g., sedimentation) or water quality influences. Atlantic Coast Pipeline, LLC (Atlantic) conducted baseline benthic macroinvertebrate surveys in accordance with the study plan developed using field sampling procedures from the Rapid Bioassessment Protocol (RBP) Overview (specific to the GWNF provided by the U.S. Forest Service (USFS)). Additional details regarding the field sampling procedures (particularly under potential low-flow conditions) were discussed between Ms. Dawn Kirk (USFS) and Mr. Michael Davison (CEC biologist) during a May 3, 2016 telephone conversation.

During the survey window of March 15 to May 30 in 2016 and 2017, Atlantic completed sampling at fourteen waterbody crossings in the GWNF. Atlantic is proposing post-construction monitoring be performed at the previously sampled waterbody crossings for a period of one year following construction. This monitoring duration is contingent on the post-construction Macroinvertebrate Aggregated Index for Streams (MAIS) scores remaining comparable to the respective baseline survey MAIS score for each station and, if not, whether any change is within the range of natural variability. Atlantic is submitting the attached Post-Construction Benthic Macroinvertebrate Survey Monitoring Plan.

Project and Company Background

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Duke Energy, Piedmont Natural Gas, and Southern Company Gas. The company was created to develop, own, and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. For more information about the ACP, visit the company's website at www.atlanticcoastpipeline.com. Atlantic has contracted with Dominion Energy Transmission, Inc., a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic.

Atlantic looks forward to continuing to coordinate with you on this project. Please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding the project. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Dawn Kirk, Biologist, George Washington National Forest
Jennifer Adams, George Washington National Forest
Richard B. Gangle, Dominion Energy

Attachments: Post-Construction Benthic Macroinvertebrate Survey Monitoring Plan

Dominion Energy Services, Inc.
5000 Dominion Boulevard,
Glen Allen, VA 23060

July 20, 2017

BY OVERNIGHT (OR EXPRESS) MAIL

Mr. Troy Morris
U.S. Forest Service
George Washington National Forest
5162 Valleypointe Parkway
Roanoke, Virginia 24019

Re: Dominion Energy Transmission, Inc., Atlantic Coast Pipeline: Submittal of the Summary Report of Habitat Assessments and Surveys of Regional Forester Sensitive and Locally Rare Insects on George Washington National Forest along the Atlantic Coast Pipeline in Virginia

Dear Mr. Morris,

Atlantic Coast Pipeline, LLC (Atlantic) is a company formed by four major U.S. energy companies – Dominion Energy, Duke Energy, Piedmont Natural Gas, and Southern Company Gas. The company was created to develop, own, and operate the proposed Atlantic Coast Pipeline (ACP), an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. For more information about the ACP, visit the company's website at www.dom.com/acpipeline. Atlantic has contracted with Dominion Energy Transmission, Inc. (DETI), a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic.

Atlantic has been conducting field routing, environmental/ biological, cultural resources, and civil surveys along the proposed pipeline route to collect information needed by Federal Energy Regulatory Commission (FERC) and other regulatory and land managing agencies to review and permit the ACP. The insect species outlined in the attached report were identified for survey within George Washington National Forest boundaries through consultation and coordination with the USFS and the Virginia Department of Conservation and Recreation.

Insect surveys within George Washington National Forest occurred between June 13 and 25, 2016, with supplementary sampling for Maureen's hydraenan minute moss beetle was conducted between October 3 and 4, 2016. Additional surveys were completed for mainline route adjustments and access roads within GWNF between June 5 and 12, 2017. Atlantic requests concurrence that the measures described in the attached report are sufficient to address these insect species on Forest Service property.

We would appreciate your review and concurrence and look forward to continuing to work with you on the ACP. Please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com if there are questions regarding this report. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.

5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

FOR RICHARD GANGLE

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Troy Morris, George Washington National Forest
Jennifer Adams, U.S. Forest Service
Richard B. Gangle, Dominion Energy Services

Attachments: Summary Report of Habitat Assessments and Surveys of Regional Forest Sensitive and Locally Rare Insects on George Washington National Forest along the Atlantic Coast Pipeline in Virginia

Dominion Energy Services, Inc.
5000 Dominion Boulevard,
Glen Allen, VA 23060

July 21, 2017

BY EMAIL

Mr. Troy Morris
U.S. Forest Service
George Washington National Forest
Roanoke, VA 24019

Re: Atlantic Coast Pipeline, LLC**,** Submittal of George Washington National Forest American Ginseng Relocation Plan

Dear Mr. Morris:

On behalf of Atlantic Coast Pipeline, LLC (Atlantic), Dominion Energy Transmission, Inc. is pleased to provide the attached George Washington National Forest (GWNF) American Ginseng Relocation Plan. The plan was prepared to address the potential for direct impacts to state-listed threatened American ginseng populations on GWNF property within the Atlantic Coast Pipeline (ACP) workspace in Virginia.

The relocation plan describes Atlantic's proposed relocation of American ginseng populations identified on GWNF lands during ACP field surveys in 2105 and 2016. Four relocation sites identified outside but near the ACP footprint have been selected to provide suitable relocation areas for plant occurrences currently within the current ACP construction footprint. If approved, relocations will take place in Fall 2017.

Atlantic is requesting your review and concurrence of the attached relocation plan, which is based on the results of botanical surveys to date on the ACP in Virginia. Atlantic anticipates the GWNF may wish to field-verify the selected relocation areas prior to the onset of transplanting activities and will coordinate a field visit with GWNF staff in Summer 2017.

Project and Company Background

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy Services, Inc. (Dominion Energy), Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Company Gas. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The Project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina. Atlantic has contracted with Dominion Energy Transmission, Inc., a subsidiary of Dominion Energy, to

permit, build, and operate the ACP on behalf of Atlantic. The ACP will be regulated by Federal Energy Regulatory Commission (FERC) under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

Atlantic looks forward to coordinating with you on this Project. Please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding this information. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: Richard B. Gangle, Dominion Energy
Fred Huber, U.S. Forest Service, George Washington National Forest
Jennifer Adams, U.S. Forest Service George Washington National Forest

Attachments:
George Washington National Forest American Ginseng Relocation Plan

Dominion Energy Services, Inc.
5000 Dominion Boulevard,
Glen Allen, VA 23060

July 26, 2017

BY EMAIL

Mr. Troy Morris
U.S. Forest Service
George Washington National Forest
5162 Valleypointe Parkway
Roanoke, Virginia 24019

Re: Dominion Energy Transmission, Inc., Atlantic Coast Pipeline: Submittal of the Revised Field Surveys for Forest Sensitive Species (Class Diplopoda and Gastropoda) on Federal Lands within the George Washington National Forest for the Atlantic Coast Pipeline Project in Virginia

Dear Mr. Morris,

Atlantic Coast Pipeline, LLC (Atlantic) is a company formed by four major U.S. energy companies – Dominion Energy, Duke Energy, Piedmont Natural Gas, and Southern Company Gas. The company was created to develop, own, and operate the proposed Atlantic Coast Pipeline (ACP), an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. For more information about the ACP, visit the company's website at www.dom.com/acpipeline. Atlantic has contracted with Dominion Energy Transmission, Inc. (DETI), a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic.

Atlantic has been conducting field routing, environmental/ biological, cultural resources, and civil surveys along the proposed pipeline route to collect information needed by Federal Energy Regulatory Commission (FERC) and other regulatory and land managing agencies to review and permit the ACP. The myriapod (centipede/millipede) and gastropod (snail) species outlined in the attached report were identified for survey within George Washington National Forest through consultation and coordination with the USFS and the Virginia Department of Conservation and Recreation.

Initial surveys within the George Washington National Forest were conducted between June 13 and 21, 2016, and additional surveys were completed for mainline route adjustments and access roads within GWNF between June 5 and June 12, 2017. Although a large diversity of myriapods and gastropods were observed during these surveys, none of the target sensitive species were observed or collected. Atlantic requests concurrence that the survey efforts described in the attached report are sufficient to address these species on Forest Service property.

We would appreciate your review and concurrence and look forward to continuing to work with you on the ACP. Please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding this report. Please direct written responses to:

Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Troy Morris, George Washington National Forest
Jennifer Adams, U.S. Forest Service
Richard B. Gangle, Dominion

Attachments: Revised Field Surveys for Forest Sensitive Species (class Diplopoda and Gastropoda) on Federal Lands within the George Washington National Forest for the Atlantic Coast Pipeline in Virginia

U.S. Forest Service – Southern Region

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

June 30, 2017

Timothy Abing, Director
Lands, Minerals, and Uses
U.S. Forest Service, Southern Region
1720 Peachtree Road NW, Suite 792S
Atlanta, Georgia 30309-2405

RE: Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
FERC Docket Nos. CP15-554, et al.
Responses to Forest Service COM Plan Comments

Dear Mr. Abing:

Atlantic Coast Pipeline, LLC (Atlantic), is providing responses to the comments by the U.S. Forest Service (Forest Service) in its letter filed with the Federal Energy Regulatory Commission (FERC) on April 6, 2017, regarding Atlantic's draft Construction, Operation, and Maintenance Plan (COM Plan) for the proposed Atlantic Coast Pipeline Project. The responses provided by Atlantic are based on detailed discussions with Forest Service personnel and represent the mutually agreed approach to address each of the specific topics raised by the Forest Service. As requested by the Forest Service, Atlantic's responses are provided in a matrix format, Attachment A to this letter, and document information presented to the Forest Service on June 9, 2017 and associated conference calls the following week to inform the development of the final Environmental Impact Statement for the project. A revised draft version of the COM Plan incorporating this additional information will be submitted at a later date to support the issuance of a Record of Decision on the project.

Atlantic looks forward to continuing to work with the Forest Service on the ACP. Please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com if there are questions regarding this information. Please direct written responses to:

Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Leslie Hartz
Vice President Pipeline Construction, Atlantic Coast Pipeline

cc: FERC Docket Nos. CP15-554, et al.
Clyde Thompson, Forest Supervisor, U.S. Forest Service
Jennifer Adams, Special Projects Coordinator, U.S. Forest Service
Richard B. Gangle, Dominion Energy

Enclosures:
Attachment A – COM Plan Comment Response Matrix

ATTACHMENT A
COM PLAN COMMENT RESPONSE MATRIX

Comment #	Page #	Section #	Subject	FS Comment	ACP Response
1	N/A	Attachments/General	process	All Attachments need pages numbered in final version of COM plan, possibly using a format of "attachment number-page number.	This will be done in final version of the COM Plan.
2	N/A	Alignment Sheets and COM Plan	process	Acronyms and terms should be the same in both drawings and word documents. Documents refer to ATWS as additional temporary workspace. Drawings show symbol for extra workspace.	Acknowledged.
3	i	TOC		The COM Plan includes many types of plans that are part of construction, such as Section 4.0 Timber Removal Plan, Section 5.0 Fire Prevention and Suppression Plan, Section 6.0 Blasting Plan, Section 7.0 Traffic and Transportation Management Plan, etc.). But the COM Plan does not include a Section Plan for the main part of construction: Excavation and Embankment (Cut and Fill) Construction. Section 2 Project Description is not an Excavation and Embankment (Cut and Fill) Construction Plan. Section 2 and other Sections of the COM Plan make reference to Attachment A as "typical right-of-way configurations". But Attachment A has only two typical construction cross-sections, and neither typical is typical of the construction that would be on NFS lands. In addition, the Cut and Fill Construction configuration has unrealistic and unstable cut-and-fill slope angles. An Excavation and Embankment (Cut and Fill) Construction Plan with a typical for each different combination of construction methods + topographic positions on NFS lands is needed 1) to verify land requirements, 2) to assess the scope and magnitude of the slope modifications and surface and subsurface disturbance on NFS lands, and 3) to assess the potential for project-induced landslides (cut slope failures, fill slope failures, trench spoil failures, temporary spoil failures, topsoil segregation failures), 4) to develop a Slope Stability Plan to design geotechnical measures to avoid or reduce the potential for project-induced landslides. Provide an Excavation and Embankment (Cut and Fill) Construction Plan either as a section within Section 2 or as a new Section immediately following Section 2. For each type of construction configuration on NFS lands, provide a typical construction cross-section perpendicular to centerline, and a typical construction cross-section parallel to centerline for 100 feet up station and down station from the cross-section perpendicular to centerline, including as applicable, such configurations as: 1. Ridgetop construction (temporary ROW 125-foot-wide) requiring cut-and-backfill of ridgetop in addition to trench. 2. Ridgetop construction (temporary ROW 125-foot-wide + ATWS on mid-to-upper slope) requiring cut-and-backfill of ridgetop in addition to trench. 3. Ridgetop construction (temporary ROW 125-foot-wide + ATWS on lower slope near stream crossing) for ridges which extend downslope to stream crossings. 4. Steep sloping ridgetop construction using winch line (temporary ROW 125-foot-wide). 5. Steep sloping ridgetop construction using winch line (temporary ROW 125-foot-wide + ATWS on mid-to-upper slope). 6. Steep sloping ridgetop construction using winch line (temporary ROW 125-foot-wide + ATWS on lower slope near stream crossing) for steep sloping ridges which extend downslope to stream crossings. 7. Planar slope construction perpendicular to contours (temporary ROW 125-foot-wide). 8. Planar slope construction perpendicular to contours (temporary ROW 125-foot-wide + ATWS on mid-to-upper slope). 9. Planar slope construction perpendicular to contours (temporary ROW 125-foot-wide + ATWS on lower slope near stream crossing) for planar slopes on lower slopes near stream crossings. 10. Steep planar slope construction perpendicular to contours using winch line (temporary ROW 125-foot-wide). 11. Steep planar slope construction perpendicular to contours using winch line (temporary ROW 125-foot-wide + ATWS on mid-toupper	Atlantic has had discussions with the NFS about successful construction on steep slopes and ridge tops. Additional information has also been provided since receiving the COM Plan comments that have addressed these concerns. The BIC program will be implemented to mitigate impacts associated with construction in these areas. FS asked for site-specific designs at 10 locations. Atlantic provided two of these site-specific designs that demonstrated the ability to construct in these conditions. The status of the other eight sites is listed in the table below. Site MPs Geohazard ID BIC Class Status MNF#2 72-73 D Site Specific (#4) MNF#1 73-74 C1(F) Site Specific (#5) MNF#3 79-79 D Not on NFS property MNF#4 82-83 A1(E) No site-specific design necessary GWNF#1 83.95 SS036 A1 No site-specific design necessary GWNF#2 84.9-85 SS038 C1(E) Site Specific (#7) GWNF#3 86.5-87.2 SS044 D / A1(F) No site-specific design necessary GWNF#4 120.1 SS060 C1(E) Site Specific (#11) GWNF#5 120.3 SL235 B2(E) Site Specific (#12) GWNF#6 154.6 SC1105 A2(E) No site-specific design necessary MPs referenced are FERC-filed MPs, for reference only.
4	viii	TOC		Thank you for adding the acronym "ANST" for Appalachian National Scenic Trail as requested in the Draft-1 review.	Comment acknowledged.
5	viii	TOC	Correction	Add FR for Forest Road and FT to Forest Trail to the list of Acronyms and Abbreviations, as requested in Draft-1.	The requested changes will be made.
6	viii	TOC	Correction	In Footnote 1 at bottom of page: change "George Washington and Jefferson National forest" (sic) to "George Washington & Jefferson National Forests" with Ampersand (&), capital F, plural Forests, as requested in Draft-1.	The requested change will be made.
7	ix	TOC	Reference check	Check correct name of SACG –Southern Area Coordination Group. See also Fire Plan.	The requested change will be made.

8	1	1.0 Introduction	Plan Purpose	In the introduction, suggest adding a statement about the purpose of the COM plan. The COM plan is intended to satisfy the Mineral Leasing Act of 1920's requirement that, "the Secretary or agency head, prior to granting a right-of-way or permit pursuant to this section for a new project which may have a significant impact on the environment, shall require the applicant to submit a plan of construction, operation, and rehabilitation for such right-of-way or permit which shall comply with this section. The Secretary or agency head shall issue regulations or impose stipulations which shall include, but shall not be limited to: (A) requirements for restoration, revegetation, and curtailment of erosion of the surface of the land; (B) requirements to insure that activities in connection with the right-of-way or permit will not violate applicable air and water quality standards nor related facility siting standards established by or pursuant to law; (C) requirements designed to control or prevent (i) damage to the environment (including damage to fish and wildlife habitat), (ii) damage to public or private property, and (iii) hazards to public health and safety; and (D) requirements to protect the interests of individuals living in the general area of the right-of-way or permit who rely on the fish, wildlife, and biotic resources of the area for subsistence purposes. Such regulations shall be applicable to every right-of-way or permit granted pursuant to this section, and may be made applicable by the Secretary or agency head to existing rights-of-way or permits, or rights-of-way or permits to be renewed pursuant to this section,"(30 USC 185(h)(2). The COM plan would be attached to and made part of an authorization(s) to construct, operate, maintain, and terminate the ACP project on NFS lands. Also, a disclaimer should be added stating that, in consultation with the Authorized Officer, the COM plan would be updated throughout the term of such authorization(s) as needed to reflect any necessary changes or adjustments to the plan.	The requested changes will be made.
9	2	Figure 1.1-1		Thank you for correcting Figure 1.1-1 by naming the Appalachian National Scenic Trail accurately both on the map and in the legend.	Acknowledged.
10	3	2	Correction	Add at the end of the bullet that describes AP-1, add: "All of the Mainline Pipeline Facilities that are on USFS lands are AP-1."	The requested change will be made.
11	3	Section 1.1	Correction	At the end of Section 1.1, either reword the last paragraph or add a stand-alone statement. "This COM Plan provides detailed information on requirements and standards for the ~21.1 miles of the ACP that is on USFS lands only. It does not apply on non-USFS lands." The current wording is inadequate.	The wording will be revised as requested.
12	4	2.1.1.1	document agreement	"The pipeline route crosses the MNF for a total of 5.2 miles, all within the Marlinton Ranger District." This COMP states that 5.2 miles are within the MNF. The DEIS Volume I states that 5.1 miles are within the MNF. Volume III-Part 2 states that 5.5 miles are within the MNF. State the appropriate miles on MNF lands and be consistent among documents.	The correct length is 5.2 miles.
13	4	2.1.1.1	Correction	First paragraph, second line, change to: "On USFS lands, the ACP consists of approximately 21.1 miles of a 42-inch, buried steel pipe across portions of the MNF and GWNF."	The requested change will be made.
14	5	2.1.1.1	More information needed	First paragraph states: "Some CP test stations will be installed on USFS lands." I do not find these locations detailed anywhere in the document or attachments. USFS needs to know where these are planned to ensure they are in acceptable locations. More information is needed.	Atlantic will coordinate with FS on the locations of the CP test stations and provide locations by MP. Flush mount stands can also be considered if that is preferable to the NF.
15	5	2.1.1.2	More information needed	"Typical right-of-way configurations are provided in Attachment A 7." Typical right-of-way configurations provided in Attachment A are inadequate for a COM Plan on NFS lands. The first configuration ("Atlantic Coast Pipeline AP-1 (Federal Lands Only) Typical Construction Right-of-Way Non-Agricultural Areas") is a profile (crosssection) with dimensions (feet) but is for flat ground where the only excavation is for the trench. The second configuration ("Atlantic Coast Pipeline and Supply Header Projects Cut and Fill Construction") is a profile (cross-section) for side hill construction but with unknown dimensions ("Additional ROW As Required") and vertical and/or horizontal distortion of configuration. The Cut and Fill Construction configuration has unrealistic and unstable cut-and-fill slope angles. Neither of these two configurations is representative of most of the proposed pipeline ROW construction on NFS lands. In order to verify land requirements, typical cross-sections need to have dimensions (feet) and be based on stable angles for cut and fill slopes. The second configuration ("Atlantic Coast Pipeline and Supply Header Projects Cut and Fill Construction") has neither dimensions nor stable cut and fill angles. See the comments on TOC on the need for several typical drawings in an Excavation and Embankment (Cut and Fill) Plan in order to verify land requirements. "The alignment sheets (Attachment B) provide exact dimensions of the proposed construction right-of-way widths on NFS lands." Because the configurations in Attachment A are not representative of most of the proposed pipeline ROW construction on NFS lands, and because the Cut and Fill Construction configuration has unrealistic and unstable cut-and-fill slope angles, we have concerns about the basis for ACP's determination of the "exact dimensions of the proposed construction right-of-way widths on NFS lands" in the alignment sheets. Attachment A and Attachment B are mismatched in detail. Attachment B provides "exact dimensions of the proposed construction rightof-way widths on NFS lands" but Attachment A provides configurations not representative of most of the proposed pipeline ROW construction on NFS lands, and a cut-and-fill configuration with no dimensions.	Based on communication with the FS and on Atlantic's May 14 and May 19, 2017 letters to the FS, these comments have been resolved. See also response to Comment 3.

16	5	2.1.1.2	ATWS Specifications	"Additional temporary workspace (ATWS) is proposed at certain locations, such as road crossings, and where additional spoil storage, log landings or equipment staging is needed." This statement is inadequate in describing the scope and magnitude of additional temporary workspace (ATWS) on NFS lands. Section 8.3.2 states, "ATWS measuring 50 by 150 feet will typically be required on both sides of the corridor and both sides of the crossing at wetlands, waterbodies measuring greater than 10 feet in width, two lane roads, and railroads. ATWS measuring 25 by 100 feet will typically be required on both sides of the corridor and both sides of the crossing at waterbodies measuring less than 10 feet in width and single lane roads." Where ATWS adds 50 feet on each side of the 125-feet-wide temporary construction ROW, the results is a 225-feet-wide temporary construction ROW. Where ATWS adds 25 feet on each side of the 125-feetwide temporary construction ROW, the results is a 175-feet-wide temporary construction ROW. The ATWSs 40 to 80% increase in width is a major increase in temporary construction. So far, more than 80 ATWS are identified on the GWNF, and at least 11 ATWS on the MNF. 80 ATWS would mean about 40 sections where the temporary construction ROW would be 175-feet-wide or 225-feet-wide rather than 125-feet-wide. In order to verify land requirements for ATWS, typical cross-sections with dimensions (feet) and stable angles for cut and fill slopes are needed where ATWS would have cuts or fills including log landings or storage of temporary spoils. See the comments on TOC on the need for several typical drawings in an Excavation and Embankment (Cut and Fill) Plan in order to verify land requirements ATWS. Equally important is that the ATWS for stream crossings in the mountains narrow valleys would be excavated into steep slopes at the base of or on the lower slopes of the mountainside. Stream down cutting and incision in narrow mountain valleys makes these lower slopes near streams susceptible to stream or storm-induced landslides as well as excavation-induced slope failures, such as by a road or pipeline construction. 1. For each ATWS pair (on both side of the pipeline corridor), provide a profile (cross-section) perpendicular to the centerline with dimensions (feet) based on lidar or detailed survey showing the ATWS pair and the 125-feet-wide temporary construction ROW. 2. For each ATWS pair (on both side of the pipeline corridor), provide three profiles (cross-sections) parallel to the centerline with dimensions (feet) showing the ATWS pair and the 125-feet-wide temporary construction ROW: 1) one cross-section along the centerline, 2) a cross-section in each ATWS. 3. For each unpaired ATWS, provide a profile (cross-section) perpendicular to the centerline with dimensions (feet) showing the ATWS and the 125-feet-wide temporary construction ROW. 4. For each unpaired ATWS, provide two profiles (cross-sections) parallel to the centerline with dimensions (feet) showing the ATWS and the 125-feet-wide temporary construction ROW: 1) one cross-section along the centerline, 2) a cross-section in the ATWS. 5. Provide a detailed description of the construction activities and ground disturbance that will occur in each ATWS. 6. Provide a table with basic information for each paired and unpaired ATWS for the GWNF and the MNF. Coordinate and include or reference the ATWS cross-sections and information listed here with the Excavation and Embankment (Cut and Fill) Plan described in the comments on TOC.	Based on communication with the FS and on Atlantic's May 14 and May 19, 2017 letters to the FS, these comments have been resolved. See also Comment 3.
17	5	2.1.1.2	Restoration and Rehabilitation Plan	"All temporary construction work areas outside the permanent right-of-way will be restored in accordance with the Restoration and Rehabilitation Plan." The USFS had substantial edits to the Restoration and Rehabilitation Plan. This document lacked NFS land-specific direction. Please see the comments from USFS staff to this document.	Acknowledged.
18	5	2.1.1.2	Topsoil segregation	Topsoil segregation could require additional construction ROW width as allowed in FERC's Upland Erosion Control, Revegetation, and Maintenance Plan. The FS and ACP are still discussing topsoil segregation needs on NFS lands. Revise as needed based on the outcome of these discussions.	Consistent with Atlantic's May 19 and May 26, 2017 letters to the FS, the following text will be added at appropriate places within the document: "Atlantic will segregate topsoil over an approximately 20-foot wide strip roughly centered on the pipeline centerline from which stumps have been removed, at the following locations: MPs 73.4 to 73.6, 80.4 to 80.6, 82.6 to 83.0, 83.2 to 83.4, 83.6 to 83.9, 121.4 to 122.4, and 122.7 to 122.8. In these areas, after stumps have been removed Atlantic will segregate the top six inches of soil. An additional 25 feet of ATWS is required to accommodate the stockpiling of topsoil at these locations. In areas where topsoil segregation is conducted, subsoil from trench excavations will be placed adjacent to the topsoil in a separate pile to allow for proper restoration of the soil during backfilling and restoration. Gaps will be left between the topsoil and subsoil piles to prevent stormwater runoff from backing up or flooding. Mixing of topsoil and subsoil piles will be prevented by separating them physically or with a mulch or silt fence barrier, where necessary and dictated by site conditions, to accommodate reduced workspace. Topsoil piles will be stabilized to minimize erosion loss, using sediment barriers, mulch, temporary seeding, or functional equivalents. In areas where topsoil segregation is not performed, during the clean-up and restoration phase Atlantic will apply soil conditioning amendments such as ProGanics or other similar biotic soil media, at two times the minimum application rate (or at the optimal rate to enhance revegetation success, as determined in consultation with the FS), and will install a hydraulically-applied growth media system such as Flexterra or a similar product. Atlantic has also agreed to fund an off-site mitigation program aimed at achieving long-term improvement of soil productivity on NFS lands." Atlantic will coordinate with FS regarding the use of the additional 25 feet of ATWS on slopes >40%.

19	5	2.1.1.2	Correction	Land Requirements: Delete word “nominal” from the description of the width of the proposed right-of-way. The paragraph goes on to say that this width accommodates construction activities for most pipelines; so this proposal is neither nominal for the industry nor for Forest Service special uses as evidenced by the DEIS. The point being made here is that it is insufficient in places therefore ATWS is required; but it’s a subjective word.	"Nominal" refers to the typical width of the construction right-of-way. The nominal width of the right-of-way is 125 feet. Additional temporary workspace is required at roads, streams, wetlands, side hill situation, etc. and are shown on the construction alignment sheets.
20	6	2.1.1.2	Correction	Table 2.1.1-1 Lists GWNF Road 281 as Tower Mountain Road. FS road 281 is Campbell Hollow Road.	The requested changes will be made.
21	6	Table 2.1.1-1	Correction	This table shows the same total number of access roads on the GWNF as Draft-1, however one road has been dropped off and one new one added. The road that was a part of Draft-1 that is not on this table in Draft-2 is #06-001-B001.AR7, 1.2 miles long. This is 1.2 miles of riparian area running directly up Laurel Run. However, this access road still shows on Alignment Sheet #127 of 344 in Attachment B, and in the Access Road Improvement Maps received as a part of Attachment F. To minimize any chance for confusion, this road should be removed from all documents, maps, sheets, etc associated with the project, AND a footnote should be added to this table stating that this referenced road is no longer proposed for any construction or use.	The requested footnote will be added to Table 2.1.1-1. Updated drawings will be provided.
22	6	Table 2.1.1-1	New information	“New Road” 06-001-B001.AR7 at MP 85.3 is indeed truly a new road that was not in Draft-1. Confirm that all required field surveys have been completed.	Status of access road field surveys, as shown in Table 2.1.1-1 will be updated.
23	6, 7	2.1.1.2, Table 2.1.1-1	Roads	Planned roads on the GWNF: Please add FDR 1757, which was extended by 0.273 miles in FY16. This road has recently been approved for use during the boring phase of the project. Route 309 is a closed road (meaning it is in storage). Route 449A is a closed road (meaning it is in storage), listed in the system as 3.19 mi. The pipeline is proposing to use 3.0 miles of 449 and 449A, need clarification as to how many miles of 449 and how many miles of 449A? Road 006-001-B001-AR5 appears to end on National Forest (66+00 to +68+40). This is missing from the table. 007-001-AR1.AR6 is listed in the table as 0.8 miles, but only 1392 feet are shown on the map (roughly 0.25 miles). Please clarify.	GWNF Road 1757 will be added to Table 2.1.1-1. Access Road 06-001-B001-AR5 will be added to Table 2.1.1-1. Lengths and acreages for FS Roads 449 and 449A will be recalculated. Length of FS Road 007-001-AR1.AR6 will be corrected.
24	8	2.1.1.3	Formatting	Formatting of entire section needs to be revised. Separate each of the 4 “spreads” on USFS lands into its own paragraph. Currently, some are split (stand-alone) and some are lumped. Very confusing. Should be broken into 3 additional paragraphs.	The requested changes will be made.
25	8	2.1.1.3	data confirmation	Please confirm the amount of USFS lands on the GWNF within each spread, and the description of Spread 3A on the GWNF. The description does not match the depiction in Figure 2.1-1 and the length on USFS lands within this spread seems high.	The lengths have been confirmed.
26	8	Table 2.1.1-2	Add total to table	To be transparent and to assist in considering cumulative effects, add a column to this table to show the Total Construction ROW, which is a compilation of the Permanent ROW and the Temporary Workspace. Using current figures, once verified/confirmed, for the Mon, this is 80.1 ac, for the GWNF = 249.7 ac, total USFS = 329.8 acres.	The table will be revised.
27	008 and 85	2.1.1.2 Land Requirements and 8.3.3	Agreement	“Some existing roads require minor grading and graveling and/or widening to accommodate construction vehicles.” It appears from the tables above this page 8 statement that all existing roads on USFS will require improvements.	The text will be modified accordingly.
28	10, 11	Table 2.1.1-3	Agreement	Need either this table MODIFIED or a new additional table developed to show the information stated in text form in section 2.1.1.3. This table shows the entire 300+ mile long project. We need also a tabular summary of the description shows detail for the Spreads on USFS lands (3, 3A, 4, 4A, and 5) with explicit detail about the ANST-BLR HDD within Spread 5. Also need a column added showing which national forest Is involved in which spreads, and the length of each spread on USFS lands.	New Table 2.1.1-4 will be added.
29	11	2.1.1.3	Timber removal	“Timber removal on the MNF is scheduled to take place between November 1 and April 1 of both construction seasons. For any areas of the right-of-way within 5 miles of known Indiana bat hibernacula, no timber removal will occur before November 16.” Cite LRMP standards within this document. This document needs to include specific direction on NFS Lands for construction, operation, and maintenance. Timber harvesting on steep slopes (40% or greater) would need to be done in a manner that ensures slope stability and complies with LRMP SW07 from the time the timber is harvested until pipeline construction begins. Winter logging must meet LRMP SW09 as well as all other erosion control plans and LRMP standards. Timber harvesting by use of skid trails and landings must comply with SW40. Options include helicopter logging, use of overland equipment that does not require skid road development, and other non-ground disturbing methods as approved by FS personnel. Sediment and erosion control features are to be employed on these slopes as outlined in the COMP. Short term erosion control measures are to be utilized as directed in the COMP prior to the start of disturbance for the construction of the pipeline replacement. All timber harvest roads are to be fully reclaimed and restored according to MNF LRMP standards (RF07, RF12, RF13, and RF15).	There is no LRMP standard that requires the proposed bat hibernicula restiction dates - these dates are specified in the Biological Assessment. No changes appear necessary regarding LRMP standard SW07. Atlantic has provided information to support the FS’ determination of whether an LRMP amendment is required or if the design is an acceptable alternative that meets MNF LRMP SW07. Regarding LRMP standards SW09 and SW40, these have been added to the Timber Removal Plan (Section 4.7.2.1). The right-of-way will be used for hauling logs to landing sites, and will be restored as part of overall pipeline right-of-wat restoration. Regarding reclamation of timber harvest roads, no FS roads are proposed for post-construction de-commissioning. Timber felling schedule on steep slopes is driven by migratory bird and bat restrictions. Tree felling consists of manual cutting only and laying the trees on the ground. Tree removal will commence in April but could commence earlier if ground conditions permit. SW07 applies throughout the year and may limit tree removal in wet conditions on steep slopes.
30	11	2.1.1.3	Timber removal	Timber Removal - Bottom of page, the wording used to restrict timber removal is confusing. Is it restricted to occur during those dates or restricted not to occur during those dates?	Since several comments indicate confusion over meaning of the term "restricted" period as it applies to the construction schedule, the following wording will be substituted: "Vegetation pre-clearing (tree felling and mowing) on the MNF is scheduled to take place between November 1 and April 1 of both construction seasons, which will avoid West Virginia’s migratory bird nesting season. For any areas of the right-of-way within 5 miles of known Indiana bat hibernacula, no timber removal will occur before November 16. Removal of commercial timber from the construction right-of-way to landings will take place after April 1, but could commence earlier if ground conditions permit. Vegetation pre-clearing (tree felling and mowing) on the GWNF is scheduled to take place between November 1 and March 15 of both construction seasons, which will avoid Virginia’s migratory bird nesting season. For any areas of the right-of-way within 5 miles of known Indiana bat hibernacula, no timber removal will occur before November 16. Removal of commercial timber from the construction right-of-way to landings will take place after April 1, but could commence earlier if ground conditions permit."

31	11	2.1.1.3 Construction Schedule	Seasonal Restrictions	"Based on agency consultations to date, timing restrictions for tree clearing in West Virginia and Virginia are as follows: • West Virginia: o migratory birds: restricted between April 1 through August 31 o Indiana bat: restricted between April 1through November 15 • Virginia: o migratory birds: restricted between April 1 through August 15 o Indiana bat: restricted between April 1 through November 15 (if hibernacula is within 5 miles of right-of-way); otherwise April 15 through September 15." These restrictions will result in timber removal operations mostly occurring outside what is termed the "normal operating season" for timber harvesting on the GWNF. December 15 to March 15 is considered outside "normal operating season" on the GWNF. This means the FS will have more contractual authority to stop operations due to high soil moisture and increased rutting hazards due to weather than we would during the "normal operating season". The MNF may also have similar designations. Temporary erosion control structures and treatments will be required as some tree clearing will occur outside normal seeding seasons. The identified seasonal restrictions on timber removal operations may also conflict with current Forest Plan standards addressing slope stability concerns when working in areas with steep slopes, as well as other aquatic T&E and sensitive species concerns of soil movement and stream crossings that restrict timber removal activities during winter months. Conflicting seasonal restrictions concerning T&E and Migratory Bird species have been brought to the attention of the FWS.	Acknowledged.
32	12	2.1.1.3	Stream and Wetland Crossings	"Stream and Wetland Crossings At streams containing sensitive fisheries and other sensitive aquatic organisms, crossings utilizing dry crossing methods will be scheduled to occur during the least sensitive periods, determined in consultation with federal and state/commonwealth agencies, including the USFS." Incorporate USFS LRMP standards for construction, operation, and maintenance on stream and wetland crossings on NFS Lands. ACP must meet the LRMP guidelines and standards (SW37).	Section 9 incorporates LRMP standards and guidelines. It does not reference SW37, which deals with buffers, but ACP has adopted ATWS setbacks from streams.
33	12	2.1.1.3	Migratory Birds	"If additional bald eagle nests or occupied bald or golden eagle winter roosting habitat are identified ahead of or during construction, Atlantic will follow the National Bald Eagle Management Guidelines for work within 660 feet of bald eagle nests." Comment: To the end of this sentence needs to be added, "except on USFS lands, where the agency-specific buffers listed above (Table 5.2.1-2) will be followed". We have also made this comment on the Migratory Bird Plan.	There is no Table 5.2.1-2. However, the text will be changed to read "If additional bald eagle nests or occupied bald or golden eagle winter roosting habitat are identified ahead of or during construction, Atlantic will follow the National Bald Eagle Management Guidelines for work within 660 feet of bald eagle nests on the GWNF, and within 1500 feet of nesting sites that have been active within the last three nesting seasons on the MNF, as required by MNF Standard W25. For tree clearing that occurs during the winter roosting or nesting season, a qualified biological monitor will accompany the clearing crews."
34	12	2.1.1.3	Migratory Birds	"For tree clearing that occurs during the winter roosting or nesting season, a qualified biological monitor will accompany the clearing crews for work conducted in areas where golden and bald eagles are believed to be present on USFS lands." Comment: The phrase "where….believed to be present" sounds like the biological monitor will only survey in certain areas. Please remove the phrase "for work conducted in areas where golden and bald eagles are believed to be present on USFS lands". Given the large home range sizes of wintering bald and golden eagles, they can be present anywhere during the winter season along the proposed route that crosses National Forest lands. Therefore, a biological monitor will need to be present while clearing crews are working in the proposed pipeline route. In addition, bald eagles start nesting activities early in the calendar year, well before the normal breeding season of most migratory birds.	The requested changes will be made.
35	12	2.1.1.3	Timber removal	Document states: "Timber removal on the GWNF is scheduled to take place between November 1 and April 1 of both construction seasons." This statement is repeated throughout the document. From previous COM plan comment number 57: This includes a time of year that is normally outside the normal operating season for FS timber sale contracts. Please continue to consult with the FS regarding the timing of timber removal to ensure consistency with requirements for wildlife. In addition, As previously discussed between the FS and FWS, this bat and TOYR for migratory birds may be in conflict with erosion and sediment control standards limiting harvest activities during the winter and spring freeze/thaw, in addition to TOYR for aquatic species. A prioritization of the TOYRs needs to be agreed upon among management agencies. These TOYR conflicts need to be addressed and reconciled.	Acknowledged.
36	12, 15	Tables 2.1.1-1, 2.1.1-2	Additional info	These 2 tables continue to do a poor job of defining UNT – a person must scour the fine print of the footnotes to find out what UNT is. Made this comment in D-1.	The table will be revised to change "UNT" to "Unnamed trib."
37	13	2.1.1	Formatting	Table 2.1.1-2 - formatting needs changes for flow regime column.	The requested changes will be made.
38	13	2.1.1.3	Correction	Table 2.1.1-2 lists Stoutameyer Branch as a coldwater stream. As such, it should have a TOYR of March 1 – June 30th (as stated in DEIS Table 4.6.1-2)	The table will be revised.
39	16	2.1.1.4	Formatting	Similar to the comment about the format of section 2.1.1.3, above, the text in this section needs to be reformatted. Each new access road needs to be its own paragraph.	Agreed. Each new access road will have its own paragraph.
40	16	2.1.1.4	Roads	Similar to prior comment about former planned Access Road 36-014.AR3; a statement needs to be made in this section, either in main text or as a footnote, that this previously planned 1.2 mile long access road up Laurel Run is no longer planned for use. Also need to correct it in the Alignment Sheets (remove from sheet 127 of 344) and in the Access Road Maps.	Updated drawings will be provided.
41	16	2.1.1.4	Acronyms	Bottom Paragraph. Change ASHTO to AASHTO, give the full name in its first usage, and add it to the Acronyms and Abbreviations page of this document.	Agreed.
42	16	2.1.1.4	Roads	FS roads proposed for access, may not be entirely located on NFS lands or easements held by the FS. Alignment sheets for access roads must show ownership and boundary data as it relates to each proposed access road. ACP will need permission/easement from actual landowner where road needing improvement is on private lands. An example of this situation is along FS road 124 (ACP project access name 36-014.AR2) and FS roads 1026 and 55 on the Monongahela (ACP project access name 05-001-C009-AR1 and 05-001-E064AR2). ACP should check all USFS roads in similar situations.	Acknowledged.

43	16	2.1.1.4	Maps	"Maps showing locations of access road improvements on USFS lands are provided in Attachment F." Comment: Attachment F has no maps yet. However, four files, named "Access_Road_Maps_2017_01_12_Part01", "Access_Road_Maps_2017_01_12_Part02", "Access_Road_Maps_2017_01_12_Part03", and "Access_Road_Maps_2017_01_12_Part04" were provided to the USFS, but they do not provide the detail needed for impact analyses. We have requested shapefiles of the impact footprint and further details about the proposed access road improvements.	Shape files have been provided to the FS. Updated drawings will be provided.
44	16	2.1.1.4	Roads	"A number of new roads will be required." "Most of the existing USFS roads to be used for pipeline construction will require minor grading and graveling and/or widening to accommodate construction vehicles." All proposed new roads, improvements to existing roads, and the total area of impact for such work, plus a buffer on either side of 150 feet, will need to be surveyed for TES plants and an analysis of the results will need to be incorporated into the EIS and Biological Evaluation. Appropriate avoidance, minimization, and mitigation measures will need to be determined if TES populations are found.	Acknowledged.
45	17	2.1.1.4	Correction	First word on page says Dominion when it should read Atlantic.	Agreed.
46	17	2.1.1.4	Additional info	"Dominion will provide the USFS proposed design details for access road construction and improvements after civil surveys have been completed." Comment: Four files, named "Access_Road_Maps_2017_01_12_Part01", "Access_Road_Maps_2017_01_12_Part02", "Access_Road_Maps_2017_01_12_Part03", and "Access_Road_Maps_2017_01_12_Part04" were provided to the USFS, but they do not provide the detail needed for impact analyses. We have requested shapefiles of the impact footprint and further details about the proposed access road improvements.	Updated drawings will be provided.
47	17	2.1.2	Wetlands	Document states: "Wetland boundaries and other environmentally sensitive areas will also be marked at this time." Wetlands and environmentally sensitive areas should have already been identified and marked by qualified individuals. Please describe what is meant by environmentally sensitive areas and how the surveyors will know if they are in them.	The text will be revised to reflect that GPS coordinate data will be used to demarcate wetland and other senstive area boundaries prior to construction.
48	17	2.1.3	NNIS	Prior to beginning ground-disturbing activities, existing populations of NNIS will need to be controlled to prevent spreading them via project activities.	Acknowledged.
49	19	2.1.3	Topsoil segregation	"In accordance with the Upland Erosion Control Plan, in areas where topsoil segregation is required Atlantic will segregate at least 12 inches of topsoil in deep soils (more than 12 inches of topsoil) and the entire topsoil layer in shallow soils (less than 12 inches of topsoil). Excavated topsoil will be placed on the edge or edges of the construction right-of-way as shown in the typical drawings provided in Attachment A." Describe locations and techniques for topsoil segregation. For NFS lands, the default is segregation over the trench area for the top 6 inches of material, or all actual topsoil as identified by the FS, whichever is deeper, throughout all areas of National Forest land, including forested areas.	Changes to topsoil language will be made throughout document, see response to Comment 18.
50	19	2.1.3	soil and erosion prevention	"In areas where topsoil segregation is conducted, subsoil from trench excavations will be placed adjacent to the topsoil in a separate pile to allow for proper restoration of the soil during backfilling and restoration." Dominion must provide an option for preventing erosion of the piles and/or preventing the soil from becoming too saturated to backfill. Control options may include the use of temporary seeding and mulching as well as an accelerated backfill schedule along portions of the project, which will reduce the amount of time between initial excavation and backfilling.	To the text will be added "Topsoil piles will be stabilized to minimize erosion loss, using sediment barriers, mulch, temporary seeding, or functional equivalents."
51	19	2.1.3	soil and erosion prevention	"Topsoil will be segregated in accordance with the Upland Erosion Control Plan." "In areas disturbed by grading, and as required by the Upland Erosion Control Plan, temporary erosion and sediment controls will be installed…" Please add, "and the Non-Native Invasive Plant Species Management Plan," or "and other applicable plans" or something like that, given that there are more specific guidelines to protect specific resources that the Upland Erosion Control Plan does not cover.	To the text will be added "In areas disturbed by grading, and as specified required byin the Upland Erosion Control Plan and other relevant sections of the COM Plan, temporary erosion and sediment controls will be installed immediately after initial gradingdisturbance within the right-of-way to minimize erosion."
52	19	2.1.3 Clearing and Grading	Erosion prevention	"In accordance with the Upland Erosion Control Plan, in areas where topsoil segregation is required…." "Atlantic will conduct topsoil segregation in accordance with the FERC Upland Erosion Control, Revegetation and Maintenance Plan." ACP will segregate topsoil according to FS requirements, which are being developed.	Changes to topsoil language will be made throughout document, see Comment 18.
53	19	2.1.3 and elsewhere	weed-free materials	Paragraph 4 is the first of many references to weed-free materials for erosion and sediment control and revegetation throughout the document. The Forest Service has been unable to require certified weed free materials for other permittees and cooperators due to lack of availability. Please confirm that viable options exist for obtaining and using weed-free materials for this project.	The word "certified" will be removed from all relevant parts of COM Plan - material will be "weed-free".
54	19	2.1.4	Correctiondone	First paragraph, last sentence: "…..or result in heavily silt-laden water flowing into……" Remove the word "heavily." Any silt-laden water is unacceptable.	The requested change will be made.
55	19, 20	2.1.4 and 2.1.5	document agreement	Table 2.1.4-1 dealing with trench dimensions is shown within section 2.1.5. In D-1 of COM plan it was in section 2.1.4. Confirm appropriate location (I think 2.1.4) and move.	The requested change will be made.
56	20	2.1.5	Welding	"Following welding and after inspection, pipe weld joints will be coated with an epoxy coating in accordance with required specifications. If the coating is sprayed on, it will be contained within semi-automatic application rings that ensure little or no overspray of coating into the environment. The coating will be inspected for defects, and repaired, if necessary, prior to lowering the pipe into the trench." All coating must be pre-applied to pipes prior to being brought on to NFS lands. Where welds need to be made, epoxy coating may be applied on site in the trench area. Epoxy coating being applied in the trench at weld sites is to be applied by hand, no epoxy application shall be sprayed or splattered onto the surrounding environment. Any mixing of materials would need to be done in a specialized area where any spill or potential contamination can be contained and not have contact with the soil.	Some pipe joints will be coated in the ditch. When the pipe is assembled on the bank, the joints will be coated on the bank as well. Atlantic will employ meausres to ensure overspray doesn't hit the ground, taking wind conditions into consideration.
57	20	2.1.6	Trench Breakers	"As necessary, trench breakers (stacked sand bags, bags of ready mix concrete or foam) will be installed in the trench around the pipe where necessary to prevent movement of subsurface water along the pipeline." No foam shall be permitted on MNF lands. Trench breaker material may consist of sand bags, bags of concrete mix, or earthen bags (earthen material must be free from contaminates and pre-approved by FS personnel). Intervals will be based on soil type and slope. Trench plug spacing in the FERC Upland Erosion Control Revegetation and Maintenance Plan (May 2013 version) is acceptable to the Forest Service and shall be employed on National Forest lands by Dominion. Closer trench plug spacing will be allowed where Dominion determines a need due to slope steepness.	The requested changes will be made.
58	21	2.1.7	Correction	"No water will be withdrawn or discharged from sources on either the MNF or the GWNF. No hydrostatic discharge locations are anticipated to be required on either the MNF or the GWNF." No hydrostatic discharge will be approved on National Forest Lands. As, such edit this first sentence and strike other.	The suggested wording is not accurate, as some water discharges, i.e. those associated with ditch de-watering, may be required on USFS lands. Wording will be changed to reflect that no hydrostatic discharges are proposed on NFS lands.

59	22	2.1.8	Erosion prevention	“If seasonality or timing prevent the use of vegetative erosion control measures, physical measures such as matting, silt fences, etc. will be used in the short term and inspected and maintained regularly to ensure proper functioning until seeding occurs and revegetation becomes effective.” Erosion control matting will not be used on NFS lands. Soil conditioners or hydraulic mulches shall be permitted instead (FS-approval required). Silt fence shall not be used at locations of concentrated overland flow, whether the flow is natural or constructed. Compost filter socks or other controls designed to filter or chemically remove sediment from water shall be used in those locations, subject to FS approval.	"Matting" will be deleted. "Soil conditioners and hydraulic mulches" will be added.
60	22	2.1.8	Markers	Very bottom of page states, “No aerial markers will be installed on USFS lands.” Please explain whether any marking indicators are needed on NFS lands.	Added "Federal regulations require markers be placed at public road and railroad crossings, and whereever necessary to identify the location of the pipeline to reduce the possibility of damage or interference (49 CFR 192.707). Two types of pipeline markers showing the location of the pipeline will be installed after construction – line-of-sight markers and crossing markers. The markers will convey emergency information in accordance with applicable government regulations, including USDOT safety requirements."
61	22	2.1.8	Markers	The 5th and 6th paragraphs dealing with pipeline markers are unclear, especially when compared to the wording in the original D-1 of the COM plan. Suggest changing to: “Two types of pipeline markers showing the location of the pipeline will be installed after construction – “Line-of-Sight markers and “Crossings” markers. These markers will convey emergency information in accordance with applicable government regulations, including USDOT safety requirements. “Line-of-Sight” pipeline markers will be installed intermittently along the pipeline right-of-way according to ACP specifications. These “Line-of-Sight” pipeline markers will be flat fiberglass stakes (wands) at least XX high, with markings/wording on both sides of the marker. “Crossings” markers will be installed on both sides of all road, rail, and trail crossings, and at fencelines. These “Crossings” pipeline markers will be round posts (3” in diameter and 5’ in height) with markings/wording on at least one side facing the roadway, railway, or trailway, and away from the fenceline. Both types of markers will contain markings/wording required by law, including: (continue with the 5 bullet points). Include that bottom sentence about no aerial markers on USFS lands. Ensure that trails are given equal status as travelways for marking as roads and railroads throughout this section.	Added "Line-of-sight markers will be installed intermittently along the pipeline right-of-way according to ACP specifications. These line-of-sight markers will be flat fiberglass stakes with markings on both sides of the marker. Crossing markers will be installed, on both sides of all road, rail and trail crossings, and at fencelines. These crossing markers will be round posts (3 inches in diameter and 5 feet in height) with wording on at least one side facing the roadway, railway, trail, or fenceline. The markers will contain markings required by law..."
62	22	2.1.8	Cleanup and Restoration	Cleanup and Restoration – Include Visual Resources Plan to first sentence: “Revegetation measures will be implemented in accordance with the Restoration and Rehabilitation Plan and the Visual Resources Plan.” On USFS lands, clearing the entire permanent right-of-way in all upland areas could mean clearing areas that were revegetated with native plants for wildlife habitat restoration and visual aesthetics purposes. As stated in our previous comments on the COM plan, per the USFS’s conversation with FERC, and in order to reduce the effects of forest fragmentation on NFS lands and also reduce effects on visual resources, the permanent right-of-way should maintained consistent with FERC’s Wetland and Waterbody Construction and Mitigation Procedures (Procedures), for the length of the entire right-of-way on both the MNF and GWNF. Therefore, the ROW would not be cleared for the width of the right-of-way; the permanent right-of-way would be maintained in an herbaceous state for a 10-foot-wide corridor centered over the pipeline. The remainder of the corridor should be replanted with shrubs or shallow-rooted trees as approved by the USFS and in accordance with FERC’s Procedures.	The first sentence will be added to Section 2.1.10, modified as follows: “Revegetation measures will be implemented with the goal of maintaining ACP’s ability to monitor and protect the integrity of the pipeline, including the ability to conduct visual patrolling, in accordance with the Restoration and Rehabilitation Plan (Section 11) and the Non-Native Invasive Plant Plan (Section 12).” Regarding the following parts of the comment, Atlantic proposed to maintain the right-of-way in accordance with the FERC's Upland Plans to include mowing 10' centered on the pipeline at a frequency to maintain herbaceous conditions and the remainder of the permanent right-of-way once every three years. Atlantic has concerns with canopy closure over extended reaches with the recommended maintenance protocols. In addition, the stumps left in place on the permanent right-of-way would regenerate the deep rooted vegetation currently present onsite now, which would create a hazard for pipeline coating. Maintaining areas of the right-of-way in shallow rooted trees is not practical as it would require intense hand removal of deep-rooted vegetation in order to maintain a sub-climax forest community in perpituity. Pipeline safety inspections require line-of-sight view of the right-of-way from the air. A 10-foot cleared corridor in forested areas would impede Atlantic's ability to patrol its line effectively, which is a vital element in ensuring pipeline and right-of-way integrity.
63	22	2.1.8	Topsoil segregation	“Segregated topsoil will be spread over the surface of the right-of-way” please add, “with the exception of topsoil infested with NNIS” “Revegetation measures will be implemented in accordance with the Restoration and Rehabilitation Plan” Please add, “and the Non-Native Invasive Plant Species Management Plan (Section 11).”	The requested changes will be made.
64	23	2.1.9	Correction	In the first sentence, change “…wetlands, roads, highways….” to “….wetlands, roads and trails, highways,” to match the sub-header of the sub-section on “Roads and Trails” on page 27.	The requested change will be made.
65	23	2.1.9.1		“…and any additional requirements contained in federal or state/commonwealth waterbody crossing permits, including applicable permits and approvals from the U.S. Army Corps of Engineers and various state/commonwealth agencies.” “ATWS will be required on both sides of waterbody crossings to stage construction equipment, fabricate the pipeline, and store construction materials. Except as authorized by the FERC and the AO, the ATWS will be located at least 100 feet away from the water’s edge at each waterbody on USFS lands.” “Clearing adjacent to waterbodies will involve the removal of trees and brush from the construction right-of-way and ATWS areas. Woody vegetation within the construction right-of-way will be cleared to the edge of each waterbody. Sediment barriers will be installed at the top of the bank if no herbaceous strip exists. Initial grading of the herbaceous strip will be limited to the extent needed to create a safe approach to the waterbody and to install temporary bridges.” All activities taking place in or near streams or bodies of water on MNF Lands must comply with LRMP SW37, SW07, SW40, SW51, and SW52.	Reference to SW37 will be added to Section 9. Reference to SW51 will be added to Section 4. Reference to SW52 will be added to Section 4.
66	23	2.1.9.1	HDD Crossing	Regarding the reference to the HDD crossing of the ANST and BRP within this section on “Waterbody Crossings” perhaps add: “For information on the HDD crossing of the ANST and BRP, refer to subsection 2.1.9.10, and Attachment O.	The requested change will be made.
67	23	2.1.9.1	document agreement	4th paragraph in this section states that AWTS will be located at least 100’ from water’s edge at each waterbody on USFS land. However, Attachment A (Right-Of-Way Configurations) shows only a 50’ distance on multiple sheets. All of these sheets in Attachment A need to be changed. On the GWNF, the buffer is a minimum of 100 feet, and it increases with slopes > 10%	Drawings will be revised. With respect to locating ATWS further than 100' from the water's edge, this would significantly increase the duration of stream crossing construction. Atlantic believes that the impacts of a longer stream crossing construction duration outweigh any theoretical increase in protection that might be afforded by a greater buffer distance.

68	24	2.1.9.1	Correction	Vehicle and equipment refueling and lubricating at waterbodies will take place in upland areas that are a minimum of 100 feet or more from the edge of the waterbody and adjacent wetlands, and the buffer distance increases with slopes >10%.	The requested change will be made.
69	24	2.1.9.1	soil and erosion prevention	Document states: “Any non-biodegradable fabric used for bank stabilization will be removed when vegetation is re-established.” Only biodegradable fabric should be used and it should be material and of the size that does not cause a hazard to snakes or other animals getting trapped in the mesh. See page 144 of COM plan for description.	The sentence regarding "non-biodegrable fabric" will be deleted.
70	25	2.1.9.2	Forest Plan standards	“Spoil excavated from the waterbody trench will be placed and stored on the bank above the high water mark and a minimum of 10 feet from the edge of the waterbody.” Spoils 10ft away does not meet Forest Plan standards. Even if the crossing construction will take place within 48 hours with silt fence, spoils directly next to the stream pose a hazard. On USFS spoils will be stored outside of the riparian corridor, meaning 100ft or more depending on slope.	Atlantic is continuing to discuss this matter with the FS. The FS is identifying and reviewing the applicable standard(s).
71	25	2.1.9.2	dewatering area	“Additionally, fish trapped in the dewatered area will be removed and returned to the flowing waterbody.” As we commented previously, other aquatic species, including but not limited to frogs, toads, mussels, crayfish, and salamanders, also need to be removed and relocated along with the fish. This detail is stated for the various dewatering methods in section 2.4 of the draft Biological Assessment as “fish and other aquatic species”. Any species that are visible need to be removed and relocated along with the fish.	To the text will be added "Additionally, any visible fish or other aquatic species trapped in the dewatered area will be removed and returned to the flowing waterbody."
72	25	2.1.9.2	trench water discharge	“Silt-laden trench water will be discharged into an energy dissipation/sediment filtration device, such as a geotextile filter bag or straw bale (weed-free) structure or a well-vegetated upland area.” Such discharges need to go through an appropriate filtration structure in all cases, and then be discharged into a well-vegetated upland area. On NFs lands, the FS will not allow discharge in upland areas without a filtration device, and preference is for use of the geotextile filter bag rather than straw bales.	The sentence "Alternatively, the water will be discharged into areas away from the edge of the waterbody and determined by the EI to be sufficiently level and well-vegetated to avoid erosion and prevent heavily silt-laden water from entering the waterbody" will be removed from the text.
73	25	2.1.9.3	dewatering area	“Prior to dewatering the streambed, a fish relocation procedure will be implemented to remove fish from the section of the waterbody to be dewatered.” As we commented previously, other aquatic species, including but not limited to frogs, toads, mussels, crayfish, and salamanders, also need to be removed and relocated along with the fish. This detail is stated for the various dewatering methods in section 2.4 of the draft Biological Assessment as “fish and other aquatic species”. Any species that are visible need to be removed and relocated along with the fish.	To the text will be added "Additionally, any visible fish or other aquatic species trapped in the dewatered area will be removed and returned to the flowing waterbody."
74	26	2.1.9.4	Roads	Two wetlands are proposed to be crossed by 2 roads on the GWNF. The total area affected by these two roads combined is 0.6 acres, shown in Table 2.1.1-1 on page 6, and here the total area of wetland crossed is 0.1 acres. Please clarify whether all possible reasonable alternatives to the construction of these two roads have been fully explored.	Access Road AR-06-001-B001.AR4 does not actually cross the wetland; a mapping error extended the road beyond its intersection with the right-of-way where it appears, erroneously, to crosss the wetland. Access Road AR-05-001-C009AR1 crosses a wetland, but it does so just beyond the MNF property boundary, according to Atlantic's recent civil survey.
75	26	2.1.9.4	missing information	“…two are crossed in the GWNF.” We recall 3 locations on the GWNF; the MP 99.3 location is missing. Please also discuss locations and construction methods for all the wetlands crossed by access roads or ATWS.	The AP-1 route crosses the wetland at MP 99.3 (wbaa005f) just outside the GWNF boundary, according to our most recent civil survey.
76	26	2.1.9.4	Wetlands	“…non-essential equipment will be allowed to travel through wetlands once.” On NFS lands, non-essential equipment will avoid travel through the wetland. The wetlands are typically very small in size and therefore can be easily avoided by going around.	We have confirmed that no wetland on NFS lands span the entire width of construction right-of-way, and will revise the text in accordance with the comment.
77	26	2.1.9.4	trench water discharge	“Silt-laden trench water will be discharged into an energy dissipation/sediment filtration device, such as a geotextile filter bag or straw bale (weed-free) structure or a well-vegetated upland area.” Such discharges need to go through an appropriate filtration structure in all cases, and then be discharged into a well-vegetated upland area. On NFs lands, the FS will not allow discharge in upland areas without a filtration device, and preference is for use of the geotextile filter bag rather than straw bales.	Agreed. The text will be revised to indicate that all such discharges will be pumped into "energy dissipation/sediment filtration devices as required by the Procedures. Such devices include geotextile filter bags or straw bale (weed-free) structures."
78	26	2.1.9.4	Wetlands	Document states: “ATWS will be located in upland areas a minimum of 50 feet from the wetland edge.” ATWS will be located a minimum of 100 feet away from the water’s edge at each waterbody on NFS lands. On the GWNF, the buffer distance increases with slopes >10%.	The buffer distance will be revised from 50' to 100'. With respect to locating ATWS further than 100' from the water's edge, this would significantly increase the duration of stream crossing construction. Atlantic believes that the impacts of a longer stream crossing construction duration outweigh any theoretical increase in protection that might be afforded by a greater buffer distance.
79	27	Road and Trail Crossings (unnumbered header)	Correction	2nd paragraph, change to: “All roads and trails, with the exception of the ANST, that are crossed by the ACP…”	The requested change will be made.
80	27	Road and Trail Crossings (unnumbered header)	Correction	Bottom line on page – the section referenced for the ANST crossing is not the correct section.	Acknowledged. Correction will be made.
81	27	2.1.9.4	Correction	Road and Trail Crossings – □ This sub-section is found within the Wetlands Crossings section. This is out of place. □ Road crossings are listed in Section 7.4, but the COM Plan does not identify the trails crossed. A list of FS system trails should be added. □ A reference to Section 2.1.9.11 for ANST is erroneous. The correct reference is Section 2.1.9.10.	Sub-section numbers will be corrected. New Table 2.1.9.5-1 will be added, listing trails crossed on FS lands. Referenced section for ANST will be corrected.
82	27 to 33	2.1.9	Formatting	Beginning on page 27 with the unnumbered sub-section header “Roads and Trails”, the formatting of section 2.1.9 falls apart, with some bold headers being numbered and some not. ALL should be numbered. In addition, some numbered bold headers have no spaces between the number and the wording. Please see our previous comments on the COM Plan.	Sub-section formatting will be corrected.

83	28	2.1.9.5	BIC Program	"The BIC Program Team will convene in a series of design workshops to examine the identified hazards and supporting information along the pipeline alignment. The hazards will be initially identified by studies such as the "Geohazards Assessment" (which may include geotechnical or hydrotechnical investigations) or the karst study, and/or by other targeted studies such as the soil survey. These studies identify and assess or support the review of the hazard, and provide a basis to select the most applicable and robust BIC mitigation response to minimize or eliminate the hazard, and then monitor the hazard through ongoing operations. Atlantic intends to submit to the USFS supplemental drawings associated with steep slope design and will include these drawings in Attachment A." Provide detail on sections along the ROW on NFS Lands where specific BIC controls will exist and provide the effectiveness of the selected BIC Controls. Identify all slopes along the ROW on NFS lands that are greater than 40% slope. For mechanized equipment operation on slopes greater than 40% on the MNF, compliance with MNF LRMP SW07 needs to be demonstrated. All areas greater than 40% slope will require site-specific stabilization measures. On slopes greater than 30 percent, bleeder drains shall be spaced no farther apart than every other trench plug. Closer spacing may be used where ACP determines a need due slope steepness, discharge volume, or other factors. Bleeder drains may be needed on slopes less than 30 percent if subsurface flow or seeps are encountered during trench excavation. The Forest Service representative and ACP's environmental inspector will consult to determine the need for bleeder drains on slopes less than 30 percent. Protect bleeder drain outlets using rip-rap or other FS-approved material. The FS may specify alternate materials in certain locations if necessary for protection of resources. The FS will require post-construction water quality testing at selected bleeder drain outlets. Locations will be selected by the FS based on nearby sensitive resources, and the FS will provide the chemical parameters to be included in the testing.	The geohazard report, based on Atlantic's "Best In Class" Program, has been provided to the FS. The FS has agreed to not require site-specific drawings for the slopes indicated in the comment. Atlantic does not anticipate enough flow from the bleeder drains to reliably conduct water quality monitoring. In addition, Atlantic does not anticipate chemical consituents to be associated with ephemeral discharge at the bleeder drains, therefore Atlantic does not believe that water quality monitoring is necessary at these locations.
84	28	2.1.9.5	site specific design	Incorporate site specific design of steep slope stabilization measures into this section by reference. Add the design sheets and narratives to Attachment C. (reference: 10/24/2016 USFS letter to FERC, Request for Site Specific Design…)	These have been provided to the FS and will be incorporated into Attachment C.
85	28	2.1.9.5	Erosion and Sediment Control Plan	The FS has not received the project-specific Erosion and Sediment Control Plan. Please clarify when we can expect to receive this plan. Site-specific information, rather than typical drawings, is needed to determine adequate mitigation measures and impact analysis.	See response to Comment 278.
86	28	2.1.9.5	supplemental Drawings	Documents states: "Atlantic intends to submit to the USFS supplemental drawings associated with steep slope design and will include these drawings in Attachment A." Attachment A includes very general typical drawings, not specific to USFS. They do not include the correct buffers around streams as required by Forest Plans.	Atlantic has provided two steep slope design drawings to the FS and will attach these to the COM Plan. Errors in showing buffer distances will be corrected.
87	29	2.1.9.8	Roads	For snow plowing on unpaved roads on the MNF, the SUP will require leaving 2 inches of snow above the gravel surface to prevent excess road base removal. This is in the operation plan for every special use road permit. This requirement will also apply where similar language occurs in Attachment D Winter Construction Plan.	Section 2.1.1.9 of the COM Plan will be revised to reflect the requested change. Attachment D (Winter Construction Plan) is a project-wide FERC document and is not the vehicle for Forest-specific provisions.
88	31, 32	2.1.9.10	Correction	Several comments on this section: □ Reformat header to include spaces. □ Bottom paragraph says the HDD will take 12 months. It says 6 months several places elsewhere in the document. □ Need to add language to state clearly that the USFS and FERC are requiring that the ANST-BLP HDD crossing portion of Spread 5 must be completed before any work is done on any other Spread on USFS lands (affects Spreads 3, 3A, 4, 4A, and 5). □ Define and describe specifically which is the Entry Side and which is the Exit Side for the HDD. Use cardinal directions and county names. □ Change the last paragraph to state that ACP has also developed a contingency plan for the HDD crossing of the ANST and BRP, and it includes an initial contingency plan of utilizing alternative HDD paths and an alternative contingency plan using Direct Pipeline trenchless technology. And that all this is detailed in Attachment P.	Header format will be corrected. Text will be revised to change HDD duration at ANST from 12 to 7 months to match earlier schedule discussion. The third bullet point will be dropped. The locations of the entry and exit sites will be described. The final paragraph will be revised as suggested.
89	31, 32	2.1.9.10	ANST and BRP crossing	ANST and BRP Crossing: The EIS discloses that users of the ANST will be able to hear the HDD construction and provides a decibel level at the ANST's tread. A reasonable decibel threshold should be established in the COM Plan, and the decibel level should be monitored during HDD construction. If the threshold is exceeded, the HDD should cease until the noise level can be mitigated through installation of sound walls at the entry and exit sites or other means.	A threshold of 75 dB at the ANST tread is proposed, above which sound barriers will be erected in a manner to bring the noise under the threshold; this will be added to the COM Plan.
90	32	2.1.9.11	Formatting	Reformat to add spaces in header	The requested change will be made.
91	33	2.1.9.11	Correction	Last paragraph of this section. Change to: "..., any road or trail closures or detours,…..	The requested change will be made.
92	33	2.2.1	facilities inspection	"The pipeline facilities will be inspected by qualified personnel from the air (quarterly) and on foot (yearly) in accordance with the applicable regulations. This will allow for adequate viewing of the right-of-way… Foot patrols are conducted by staff trained to identify potential issues such as erosion, slips, and leaks." This is not sufficient to adequately survey for or allow for treatment of non-native invasive species, which Atlantic has stated it will control as in accordance with the MNF LRMP. Appendix J of the COM plan describes each NNIS species and its optimal treatment timeframe and method, with timeframes ranging from early spring to late fall. Please use this to develop a plan to conduct annual NNIS monitoring for each occurrence of NNIS along the pipeline route on NFS lands, so as to discover populations before they go to seed, to develop a plan for treating those populations in the same growing season before they go to seed, and to follow up after treatment the next year to ensure eradication was successful. Ensure that monitoring visits will be conducted by staff trained to identify the relevant NNIS. Please also ensure that inspectors' clothing (including boots) is clean of mud, seeds, and other plant parts prior to entering NFS lands to prevent introduction or spread of NNIS.	The facilities inspections mentioned in the comment are not related to NNIS monitoring. Comment No. 250 is a similar comment that does refer to NNIS monitoring - see response to Comment No. 250.
93	34	2.2.1	Additional info	Top paragraph – refers to foot travel (yearly). If any UTV or ATV use is anticipated or desired during operations and maintenance over the lifetime of the proposal, it should be documented here. If not, that should be stated.	Neither UTV nor ATV use is anticipated by Atlantic during routine operations and maintenance of the pipeline.
94	24	2.2.1	Correction	In 2nd paragraph on page It should be stated that "Integrity of the pipeline" includes reporting to the USFS on observed trespasses and encroachments, including those by OHV and others.	Will add "including evidence of unauthorized OHV use" to the types of observations that will be made during routine patrolling.

95	34	2.2.1	routine maintenance	Routine Maintenance: The guidance on vegetative maintenance should include routine maintenance of the edges of the corridor that will be purposefully designed to undulate and be “feathered” to avoid straight and/or parallel edges where visible from roads, trails, other use areas, and communities. If natural succession is allowed to occur at these locations, vegetation will eventually fill these areas in to a uniform density and height which will defeat the purpose. Insert a reference to Section 20 (Visual Resources Plan) here.	Dominion has committed to feathering the edge of the construction right-of-way in certain locations to minimize visual impacts. Feathering the permanent right-of-way edge once the construction right of-way has been fully restored would result in woody vegetation encroaching upon Atlantic's permanent right-of-way, impeding the ability to conduct pipeline surveillance and conduct other operations and maintenance activities.
96	34	2.2.1	Equipment	4th paragraph: States that clearing equipment will be pre-approved by the USFS. Describe what equipment ACP plans or intends on using.	The following list of equipment will be added to Section 2.1.3 of the COM Plan: • Hot Saw • Grapple Hoe • Bucket Hoe • Forwarder • Tracked Chipper • Winch Tractor • Stump Grinder • Brush Mower • Fuel Buggy • UTV • Pickup Truck • Mat Truck • Fuel Truck • Low Boy
97	34	2.2.1	Plant Species Management Plan	“Vegetation along the right-of-way will be cleared periodically…in accordance with the Upland Erosion Control Plan and Stream and Wetland Crossing Procedures” Please add, “and the Non-Native Invasive Plant Species Management Plan.”	The requested change will be made.
98	34	2.2.1	Clearing	“In uplands, trees and brush will be cleared over the entire width of the permanent right-of-way on an as-needed basis not to exceed once every 3 years” On USFS lands, clearing the entire permanent right-of-way in all upland areas could mean clearing areas that were revegetated with native plants for wildlife habitat restoration and visual aesthetics purposes. As stated in our previous comments on the COM plan, per the USFS’s conversation with FERC, and in order to reduce the effects of forest fragmentation on NFS lands and also reduce effects on visual resources, the permanent right-of-way should maintained consistent with FERC’s Wetland and Waterbody Construction and Mitigation Procedures (Procedures), for the length of the entire right-of-way on both the MNF and GWNF. Therefore, the ROW would not be cleared for the width of the right-of-way; the permanent right-of-way would be maintained in an herbaceous state for a 10-foot-wide corridor centered over the pipeline. The remainder of the corridor should be replanted with shrubs or shallow-rooted trees as approved by the USFS and in accordance with FERC’s Procedures. Please also ensure that equipment and workers’ clothing (including boots) is clean of mud, seeds, and other plant parts prior to entering NFS lands to prevent introduction or spread of NNIS, and that NNIS infestations are treated prior to setting seed so that any clearing does not spread them.	Atlantic has proposed to maintain the right-of-way, in accordance with the FERC's Upland Erosion Control, Revegetation and Maintenance Plan, to include mowing 10' centered on the pipeline at a frequency to maintain herbaceous conditions and the remainder of the permanent right-of-way, outside of planted areas, once every three years. Atlantic has concerns with canopy closure over extended reaches with the recommended maintenance protocols. In addition, the stumps left in place on the permanent right-of-way would regenerate the deep rooted vegetation currently present onsite now, which would create a hazard to the pipeline coating. Maintaining areas of the right-of-way in shallow rooted trees is not practical as it would require intense hand removal of deep-rooted vegetation in order to maintain a sub-climax forest community in perpituity.Introduction of NNIS to NFS lands by clothing or boots of workers is not expected to be significant and would be addressed via the implementation of monitoring and treatment measures proposed in the NNIS Plan. Atlantic will monitor and treat NNIS where they occur within the right-of-way and immediately adjacent where project-related activities result in their introduction or spread.
99	34	2.2.1	Correction	“DTI will monitor the right-of-way for infestation of non-native invasive species that may have been created or exacerbated by its construction activities, and may utilize USFS-approved herbicides to treat such infestations, in accordance with the Non-Native Invasive Plant Species Management Plan.” Please change the word “may” to “will,” as DTI and ACP have committed to treat NNIS as part of the necessary compliance with the MNF LRMP. Also, please add that DTI and ACP will treat infestations both prior to and after construction, as specified in the Non-Native Invasive Plant Species Management Plan. Also, monitoring and treating just the ROW is not sufficient to control NNIS. All areas of impact, including the ROW, access roads, access road improvements, ATWS, and permanent above ground facilities need to be monitored and treated for NNIS.	The requested change will be made.
100	35	2.2.2	maintenance work	Major Maintenance Work – Once initial construction is complete, the temporary construction area permit would terminate and only the long-term right-of-way would be available for any maintenance work. If any maintenance work is proposed to extend beyond the longterm right-of-way, a new temporary construction permit (and appropriate level of NEPA analysis) would be required. Sensitive resources would need to be avoided, damage to restored habitats would need to be minimized, and the affected areas would need to be restored again. Add a statement that Atlantic will seek appropriate temporary authorization(s) from the USFS in the event work areas are required outside of the permanent right-of-way boundary for major maintenance work.	The requested change will be made.
101	35	2.2.3	general	In the event of an emergency repair, after the emergency is remedied and safe operations have resumed, that the site will be restored to the conditions originally agreed upon with the Forest Service	The requested change will be made.

102	38	2.3	Additional info	Key Contacts – Recommend adding: Special Project Coordinator, George Washington and Jefferson National Forests Ecosystems Group Leader, Monongahela National Forest Lands Program Manager, George Washington and Jefferson National Forests Site Compliance Monitor, George Washington and Jefferson National Forests Site Compliance Monitor, Monongahela National Forest	The requested change will be made.
103	38	2.3	Additional info	Below is an excerpt from FSM 2716.72. Incorporate the requirements below into section 2.3, (perhaps as a separate section labeled 2.3.1): "Forest Service Manual 2716.72 - Operating Plan Requirements: Include the provisions enumerated in paragraphs 1 through 3 in all operating plans for special use authorizations. 1. Incident Notification. Require the holder to contact the authorized officer as soon as practicable after the following incidents occur on National Forest System lands covered by a special use authorization: a. An incident resulting in death, permanent disability, or personal injuries that are life-threatening or that are likely to cause permanent disability; b. A structural, mechanical, or electrical malfunction or failure of a component of a facility designed for passenger transport or any operational actions that impair the function or operation of such a facility in a way that could affect public safety; c. A search and rescue operation to locate a person; or d. Any incident that has high potential for serious personal injury or death or significant property, environmental, or other natural resource damage, including avalanches, landslides, flooding, fire, structural failures, and release of hazardous materials. 2. Method of Notification. Specify the method of incident notification. The authorized officer shall determine how incident notification must be made. The means of incident notification may be tailored to the characteristics of the authorized use or occupancy, as needed. 3. Contents of Notification. Require the holder to specify when, where, and how the incident occurred and who was present or affected by the incident." Paragraph 2 above (Method of Notification) – Atlantic will notify the AO (or his or her delegated agent) by phone as soon as possible. Atlantic will follow-up within 48 hours of notifying the AO by phone with a written incident report that meets Paragraph 3 above.	The requested change will be made.
104	40	3.5	NTPs	"Due to the two-season construction schedule, as well as the need to complete certain surveys, conduct treatment at cultural resource sites, etc., Atlantic anticipates requesting from both the FERC and the USFS partial NTPs covering those segments of the Project that are ready to commence construction and for which pre-construction conditions have been satisfied. Any such requests will document the reasons for the request of a partial NTP, as well as documentation that pre-construction conditions have been satisfied for the requested segment(s)." The Forest Service will not grant partial NTP's. NTP's will only be granted when full environmental analysis, mitigation, and LRMP compliance has been completed, and a special use permit has been issued for the entire portion of the route on National Forest lands.	Acknowledged.
105	41	3.6.1	Environmental Inspectors	Please also ensure the Environmental Inspector(s), in conjunction with the Environmental Monitors, would be responsible for: □ Implementing the NNIS plan, including a policy of clean clothing, boots, and equipment prior to each entry on NFS lands. The EI should also ensure appropriate treatment prior to any soil disturbance or timbering, post-construction monitoring several times a year or as necessary depending on the species, and same-season treatment of NNIS populations in perpetuity, for the life of the project on USFS lands, as is stated in Section 10, the Restoration and Rehabilitation Plan. □ Implementing the Restoration and Rehabilitation Plan, including erosion control plantings and wildlife plantings, monitoring for plant survival and spread and overall species composition, and ensuring follow-up treatments where establishment is not initially successful.	Among the EI's duties are included "compliance with the COM Plan". We have elected not to enumerate every specific condition of the COM Plan under the EI's duties, such as calling out the NNIS Plan. Also, the EI duties listed therein are limited to construction-related inspection, and do not include post-construction monitoring for weeds, revegetation success, etc., tasks which require specialist monitors but do not typically employ Environmental Inspectors. Inspection of revegetation plantings have been added to the list of EI's responsibilities.
106	41	3.6.2	Correction	"The USFS AO will have environmental compliance oversight over the portion of the project on USFS lands, and is responsible for determining overall environmental compliance with the COM Plan, Record of Decision, and terms of the right-of-way grant. The AO has stop work authority on all USFS lands. The AO manages the Field Compliance/Monitoring Officers. The AO is responsible for issuing NTPs on USFS lands and for approving requested project changes on USFS lands using the variance request process described in Section 3.9 below." On NFS lands, the USFS AO will have Forest Service representatives on the ground who will communicate directly with the EI and the Field Compliance/Monitoring Officers. The Forest Service representative will promptly notify the EI and/or the Field Compliance Monitoring Officers of any situation that requires corrective action. Upon receipt of such notification, whether oral or written, the EI and/or Field Compliance Monitoring Officers shall immediately stop work in the affected area until the situation has been corrected to the satisfaction of the Forest Service representative. Per our comment on the previous version of the COM plan, please change the language in the second sentence to indicate that the Forest Service ultimately has stop-work authority for all project-related activities on NFS lands.	Dominion will continue to work with the Forest Service to develop a protocol for correcting any potential compliance concerns.
107	41	3.6.3	Field Compliance Monitoring Officers	Field Compliance/Monitoring Officers – As noted in the comment above, the USFS AO will have Forest Service representatives on the ground who will communicate directly with the EI and the Field Compliance/Monitoring Officers. The Forest Service representative will promptly notify the EI and/or the Field Compliance Monitoring Officers of any situation that requires corrective action. Upon receipt of such notification, whether oral or written, the EI and/or Field Compliance Monitoring Officers shall immediately stop work in the affected area until the situation has been corrected to the satisfaction of the Forest Service representative. We are concerned that the text seems to indicate that the Field Compliance Monitoring Officers are restricted from communicating directly with the contractor. This may cause delays in relaying stop work instructions to the contractor.	Dominion will continue to work with the Forest Service to develop a protocol for correcting any potential compliance concerns.
108	42	3.6.6	Third Party Compliance Monitor	Third Party Compliance Monitor – We are concerned that the Third Party Compliance Monitor appears to be restricted from communicating directly with the contractor. This limits the potential for immediate corrective action. Also, the text states that the Third Party Compliance Manager will be responsible to approve or deny Level 2 variance requests. This statement is not correct. Only Forest Service personnel can approve variances on National Forest land, regardless of the level of the variance.	Regarding the first comment, third-party monitors are not to direct the construction contractor. The commuinication should be from the third-party monitor to the Environmental Inspector or other authorized Atlantic representative, who will in turn communicate with the contractor; the Project's communication systems and protocols will ensure that any necessary corrective actions are communicated promptly. Regarding the second comment, language will be been added to clarify that the third party compliance monitor would approve a level 2 variance request on FERC's behalf, but only after USFS has approved it.

109	42	3.6.7	Atlantic's Project Monitor	"Atlantic's Project Manager will be responsible to Atlantic and is responsible for overall management of construction activities." Atlantic's Project Manager will be responsible to Atlantic and is responsible for overall management of construction activities not existing on NFS Lands.	The National Forests are responsible for enforcing applicable permit and right-of-way grant conditions on NFS lands. Atlantic is responsible for managing construction on all lands crossed by the Project.
110	46	3.9	Correction	On USFS lands, Level 1 variances will be site specific and must be approved in writing by the USFS Field Compliance/Monitoring Officer, unless the USFS delegates this authority to the FERC Compliance Monitor. (Remove section in red)	The requested change will be made.
111	46	3.9	USFS land	On USFS lands, Level 2 variance requests will be site specific and must be approved in writing by the USFS Field Compliance/Monitoring Officer.	The requested change will be made.
112	46	3.9	USFS land	On USFS lands, Level 3 variance requests will be site specific and must be approved in writing by the AO.	Level 3 variances may also include project (or Forest)- wide changes, which are by definition not site-specific.
113	47	4.1	Timber removal Plan	The Com plan states "This Timber Removal Plan has been written to conform to the standards and guidelines contained within the LRMPs of both National Forests". This is not accurate as timber removal on steep slopes on the MNF may require a Forest Plan project specific Forest Plan Amendment.	Section 4.1 will be revised to reflect the comment.
114	47	4.1	Correction	Third paragraph – First sentence. Consider changing to: "The ACP will cross under the ANST on USFS lands administered by the GWNF.	The requested change will be made.
115	47	4.3	Correction	Please make the edits to this section in bolded italics below: Timber located on National Forest Service (NFS) lands will be paid for and disposed of through the***use of the 2400-6T or 2400-4 Forest Service Timber Sale Contract forms. The appropriate contract form will be determined*** at the discretion of the Timber Sale Contracting Officer's. The volume of merchantable timber to be removed for pipeline construction will be determined by a timber cruise complying with a cruise plan provided by the Forest Service. The cruise will evaluate forest products within the Project's footprint and provide a volume estimate for merchantable timber. The Forest Service will perform a timber appraisal based upon this cruise to determine the value of the merchantable timber to be removed***and will provide Atlantic with a Forest Service Timber Contract(2400-6T or 2400-4) for review and execution.*** Atlantic will reimburse the Federal government based on that valuation***by executing the provided Forest Service Timber Contract and paying for merchantable timber*** , prior to any cutting taking place.	The requested change will be made.
116	47	4.3	Correction	First sentence – improper use of …..National Forest Service (NFS) lands…… Consider changing to "…USFS lands….." See Also Acronyms and Abbreviations pages near Table of Contents.	The requested change will be made.
117	47	4.4	Correction	The timber cruise and extraction plan will NOT identify dollar value of the timber to be removed. That will be determined in the appraisal. Please remove "the dollar value of the timber" from the list in section 4.4.	The requested change will be made.
118	48	4.5	Correction	Please add the phrase "(a.k.a. skyline yarding)" after the first instance of the phrase "high line yarder logging." This will tie to more common terminology in the Forest Service. We only need to make this tie once.	The requested change will be made.
119	48	4.5.1	LRMP standards	"Forwarders, skyline, or other advanced harvesting system may be utilized on slopes from 35-50 percent as approved by the USFS on a case-by-case basis. Skyline systems or helicopters may be used on slopes steeper than 50 percent." Cite LRMP standards within this document. This document needs to include specific direction on NFS Lands for construction, operation, and maintenance. Timber harvesting on steep slopes (40% or greater) would need to be done in a manner that ensures slope stability and complies with MNF LRMP SW07 from the time the timber is harvested until pipeline construction begins. Winter logging must meet MNF LRMP SW09 as well as all other erosion control plans and LRMP standards. Timber harvesting by use of skid trails and landings must comply with MNF LRMP SW40. Options include helicopter logging, use of overland equipment that does not require skid road development, and other non-ground disturbing methods as approved by FS personnel. Sediment and erosion control features are to be employed on these slopes as outlined in the COM plan. Short term erosion control measures are to be utilized as directed in the COM plan prior to the start of disturbance for the construction of the pipeline replacement. All timber harvest roads are to be fully reclaimed and restored according to MNF LRMP standards (RF07, RF12, RF13, and RF15).	Bullet points will be added for SW07, SW09 and SW40 in Section 4.7.2.1. Cross references will be added to Section 4.5.1. Cross references will be added to Sections 7.6.1.1 and 7.6.1.2, which list road-related standards including RF07 and RF15. Standards RF12 and RF13 are not applicable to ACP. Both pertain to road de-commissioning, and ACP does not propose to de-commission any roads on the MNF. The single new road on the MNF will be retained for operational purposes.
120	49	4.6.1	Timber removal	The COM plan states "Timber removal on the MNF and the GWNF is scheduled to take place between November 1 and April 1 of both construction seasons, which will minimize the potential to take nesting migratory birds. For any areas of the right-of-way within 5 miles of known Indiana bat hibernacula, no timber removal will occur before November 16." Be aware that timber sale contracts identify a normal operating season. This is from March 15 to December 15 on the GWNF and generally mid-April through November on the MNF. . The November 1 – April 1 time frame for harvest may also conflict with time-of-year restrictions for aquatic species. Timber removal outside of the normal operating season may be permitted by contract so long as soil moisture is not excessive and resource damage is not occurring. However, operations outside of the normal operating season likely will be halted periodically per standard contract provisions to prevent unacceptable resource damage. Discussions are ongoing among the Forest Service, U.S. Fish and Wildlife Service, and state wildlife management agencies to determine prioritization of the various time of year restrictions.	See response to Comment 29.
121	49	4.6.1	training program	"The training program will focus on the FERC Upland Erosion Control, Revegetation, and Maintenance Plan (Plan) and Wetland and Waterbody Construction and Mitigation Procedures (Procedures), other Project-specific construction, restoration, and mitigation plans; and applicable permit conditions." Please ensure the training covers the Restoration and Rehabilitation Plan and the Non-Native Invasive Species Management Plans (Sections 10 and 11 in this document), as timber removal has the potential to be a major source of sediment and erosion, and a major vector for the spread of non-native invasive species such as Japanese Stiltgrass. To prevent the spread of NNIS as a result of timbering, known populations of NNIS will need to be treated prior to timber removal, and all equipment, clothing, and boots will need to be cleaned both prior to entering NFS lands and after working in areas of NNIS infestation before moving to areas without NNIS.	Text will be added to Section 4.6.1.
122	50	4.6.1		"Slash may be chipped and blown off the right-of-way outside wetlands or stream channels. If approved by the CO, slash may be burned. Stumps will be cut as close to the ground as possible and left in place, except over the trench line, or where grading is necessary to create a safe and level work surface. The top of the stumps will be ground flush to grade within the majority of the rights-of-way. All stumps excavated from the trench line that cannot be ground to mulch onsite will be placed along the edge of the construction rights-of-way or in temporary extra workspaces. Stumps will be hauled from the extra workspaces to a pulp mill, a permitted disposal facility, used on the rights-of-way for restoration purposes, burned, or disposed of according to land managing agency or landowner specifications. " Further coordination with the USFS is needed prior to approval of these methods. Chipped material may not be blown off of the ROW on NFS lands.	Section 4.6.1 will be revised to reflect the comment.
123	51	4.7.1	Soil quality	"Soil quality standards will be maintained and detrimental soil disturbance will be avoided. Proper skid roads will be constructed ifneeded to ensure safe operations and prot	Reference to MNF LRMP SW07 will be added to Section 4.7.2.1.

124	51	4.7.2.1	Equipment	Add a bullet stating that no mechanized equipment shall operate on slopes greater than 40%, or on wet soils, without interdisciplinary team review and line officer approval of mitigation measures that are capable of maintaining soil/slope stability (MNF LRMP SW07). Provide the alternative solution to meet this standard	The requested bullet point was added to Section 4.7.2.1. Atlantic has provided information to support the FS' determination of whether an LRMP amendment is required or if the design is an acceptable alternative that meets MNF LRMP SW07.
125	52	4.7.2.1	timber harvesting	All MNF LRMP direction that is applicable to timber harvesting shall be followed, not only the direction listed within this section. SW34, SW37, SW40, SW51, SW52, etc.	SW34 restricts tree removal from riparian buffers, but provides exception for utility crossing construction, so it was not identified as an actionable project standard. SW37 is included in Section 9.4.2.3, but will also be added also to Section 4.7.2.1, along with SW40, SW51 and SW52.
126	53	4.7.2.2	terminology	4th and 10th bullets on page refer to "Forest CO." On page 47, same broad header, section 4.3, it refers to Timber Sale Contracting Officer. Please use consistent terminology and state is correctly on the Acronym page.	The requested change will be made.
127	56	5.3.1	Acronyms	Determine correct reference for acronym SACG and use consistently here and in Acronym and Abbreviations page. I believe it is simply Southern Area Coordination Group. Please consult with the GWJNF FMO.	The requested change will be made.
128	58	5.3.2	FAO	Under the header "Fire Authorized Officer (FAO), the first sentence is unclear. The section is under "ACP Responsibilities" and the sentence says that the FAO may include dispatch centers and staff from land managing agencies. Please see our previous comments on the COM plan and consult with the Forest Service if clarification is needed.	The unclear sentence is not needed and will be deleted.
129	66	6.1	Depth to bedrock	"Based on an analysis of the Natural Resource Conservation Service's Soil Survey Geographic Database, approximately 5.0 miles of the proposed ACP pipeline route on the MNF and 12.8 miles on the GWNF will cross areas with bedrock at depths of less than 60 inches. Some of this bedrock is considered paralithic (soft) and may not require blasting during construction." Depth to bedrock needs to come from seismic refraction test results and the Order 1 Soil Survey. These results will provide the most detailed and accurate depth to bedrock along the ROW. Order 1 Soil Survey data should provide whether bedrock will be paralithic or lithic. The areas where blasting will be required should be designated on route maps for NFS Lands and provided to the USFS prior to construction.	Atlantic has used the SSURGO data to estimate the depth and type of bedrock. Locations of blasting will be field-determined during excavation. Atlantic has provided estimates of where blasting of lithic bedrock may be required.
130	66	6.1	Blasting on USFS land	Section does not do a good job of giving realistic info on extent of blasting anticipated on USFS lands. At end of first paragraph under 6.1, add a chart similar to: National Forest Pipeline Length Bedrock <60" Hard Bedrock <60" MNF 5.1 mi 5.0 mi 3.6 mi GWNF 15.9 mi 12.8 mi 7.9 mi Total ~21.0 mi 17.8 mi 11.5 mi This means it is highly likely that blasting will be needed on at least 55% of the length of the pipeline on USFS lands – this appears significant and misleading understated as currently written.	New Table 6.1-1 will be added.
131	66	6.3	Blasting on USFS land	"Blasting for grade or trench excavation will be used where deemed necessary by the Contractor, and approved by an Atlantic representative, after examination of the site." Areas where blasting is known will be provided to the USFS prior to construction.	Section 6.3 will be revised to reflect comment.
132	69	6.7.1	biological assessment	"Removing fish from blasting area and relocating them downstream (will only be used in smaller streams)." As we commented on the previous version, other aquatic species, including but not limited to frogs, toads, mussels, crayfish, and salamanders, also need to be removed and relocated along with the fish. This detail is stated for the various dewatering methods in section 2.4 of the draft Biological Assessment as "fish and other aquatic species". Any species that are visible need to be removed and relocated along with the fish.	The sentence will be revised to read: "Any visible fish or other aquatic species trapped in the blasting area will be removed and relocated downstream."
133	71	6.7.2	safety	Draft-1 of the COM Plan, in this section on Protection of Personnel, included a bullet: □ Stopping vehicular and/or pedestrian traffic near the blast site This bullet does not exist in D-2. Please include information in D-2 to address how ACP plans to ensure the protection and safety of offtrail and off-road users of USFS lands near the pipeline (hunters, bushwhackers, etc).	The bulleted item noted was not in fact removed; it appears as a sub-heading under another bullet, and merely reflects an orginizational correction from the first draft.
134	73	6.8	rock removal	"If rock removal intercepts an open void, channel, or cave, construction activities will cease in the vicinity of the void, channel, or cave until a remedial assessment is performed by a qualified geologist or engineer with experience in karst terrain." As we commented on the previous version, a qualified biologist should also be consulted. The opening should be investigated by a qualified biologist to determine if bats or other species are present in the structure, if the feature is suitable for bats (large enough, suitable microclimate), and how remediation will affect the microclimate upon which bats and other species depend. A biologist should investigate the entire biotic environment and be consulted on remediation in addition to the geologist/engineer. "If the track drill used to prepare drill holes for explosive charges encounters a subsurface void larger than 6 inches within the first 10 feet of bedrock, or a group of voids totaling more than 6 inches within the first 10 feet of bedrock, then explosives will not be used until a subsurface exploration is conducted to determine if the voids have connectivity to a deeper karst structure. The subsurface exploration will be carried out with track drill probes, coring drill, electrical resistivity, or other techniques capable of resolving open voids in the underlying bedrock. If a track drill or coring rig is used, then all open holes will be grouted shut after the completion of the investigation. " As we commented on the previous version, a qualified biologist should also by consulted. The opening should be investigated by a qualified biologist to determine if bats or other species are present in the structure, if the feature is suitable for bats (large enough, suitable microclimate), and how remediation will affect the microclimate upon which bats and other species depend. A biologist should investigate the entire biotic environment and be consulted on remediation in addition to the geologist/KS. Please define how the voids will be measured (e.g., longest dimension, shortest dimension, average diameter, etc.). A 6 inch diameter crack is too large to serve as a trigger for cessation of blasting. Use a 1 inch diameter.	The "six-inch voide" refers to a 6-inch vertical drop during drilling operations. Section 6.8 will be revised by adding the following at appropriate locations within the text: "The opening and associated biotic environment will also be investigated by a qualified biologist to determine if bats or other species are present in the structure, if the feature is suitable for bats (large enough, suitable microclimate), and how remediation will affect the microclimate upon which bats and other species depend."
135	78	7.3	Correction	Access to the Right-of-Way: Minor edit – delete the word "may" in the 1st sentence – "Some of the existing USFS roads identified for access to the pipeline right-of-way may require improvement… " Table 2.1.1-1 lists the USFS roads that require improvement.	The requested change will be made.
136	79	7.3	Correction	Last paragraph in section 7.3 – "maintence" is a misspelling. It was also misspelled in Draft-1.	The requested change will be made.

137	80	7.4	Roads	Table 7.4-1 USFS Roads Crossed by the ACP: The list doesn't include GWNF Road 468B or GWNF Road 1757. It appears to me when viewing the route in our GIS inventory that both of these GWNF roads are crossed.	The ACP route croosses Road 468B (MP 101.5), but Project maps shows the crossing is on private land near but not on the GWNF. The route parallels GWNF Road 1757 from about MP 121.8-122.4. It does not appear to cross the road, but the road trace appears to dead end near the route, and the route is close enough to the road that construction may encroach upon it. Therefore, GWNF Road 1757 will be added to Table 7.4.1, with an explanatory note.
138	80	7.5	construction	"Once on the right-of-way, construction equipment will move in a linear manner along the right-of-way as work progresses, minimizing traffic on local roads." This emphasizes the importance of treating NNIS along the right-of-way prior to construction, to avoid spreading NNIS along the right-ofway as construction progresses.	Acknowledged.
139	80	Table 7.4-1	Terms	Please see our previous comments on the COM plan and change the title to Roads and Major Travelways. Please also add the ANST info.	The organizational comment was not adopted. A new Table 2.9.5-1 will be added showing trail crossings, including the ANST, with cross reference to Section 7.
140	81	7.6.1	Roads	Specific Federal Guidelines: This is guidance pertaining to access roads. The naming of the section should be more informative as to its specific content.	Will renamed chapter title "FEDERAL GUIDELINES PERTAINING TO PROJECT ACCESS ROADS".
141	81	7.6.1.1	construction	Because installation and maintenance of new roads is a primary vector for the spread of species such as Japanese stiltgrass and garlic mustard, the following MNF LRMP Goals and Standards are also applicable: □ "VE 19 a) Work to prevent new infestations of NNIS, with emphasis on areas where species have a high probability for establishment and spread. □ VE 19 b) Work with WVDNR, utility companies, and special use operators to control NNIS in openings, rights-of way, and other use areas. □ VE 22: Projects that may contribute to the spread or establishment of noxious weeds shall be designed to include measures to reduce the potential for spread and establishment of noxious weed infestations." Please describe how the above will be addressed in order for the project to remain in compliance with the MNF LRMP.	The three standards cited will be added. These are general measures requiring NNIS control measures to be implemented. Reader will be referred to NNIS Plan.
142	82	7.6.1.1	MNF LRMP	All applicable MNF LRMP must be followed, not only the standards and guides listed in this section. SW35, SW45, SW51, etc.	Acknowledged; an effort has been made to minimize redundancy by focusing on standards specifically applicable to the various topics covered.
143	83	8	Slope Stability Plan	Provide a Slope Stability Plan section immediately before Section 8.0 the Upland Erosion Control Plan. The Upland Erosion Control Plan is described as an Erosion and Sediment Control Plan (ESCP). A Slope Stability Plan is needed to: 1) to assess the scope and magnitude of the slope modifications and surface and subsurface disturbance on NFS lands, 2) to assess the potential for project-induced landslides (cut slope failures, fill slope failures, trench spoil failures, temporary spoil failures, topsoil segregation failures), 5) to develop geotechnical design and construction measures to avoid or reduce the potential for project-induced landslides as well as to mitigate for natural landslides. The Slope Stability Plan is the foundation for site stabilization, and should appear before an ESCP in the COM Plan. The Slope Stability Plan includes but is not limited to; 1) implement the BIC Program with the site and slope stability hazard mitigation plans including BIC design and construction practices and best management practices. 2) provide design and construction measures for slope stability of large masses of loose excavated material such as trench spoils and temporary spoils in the temporary ROW and ATWS. 3) provide design, construction, maintenance and monitoring measures to provide for the short term and long term stability of the restoration fills which are temporary spoils backfilled to original contour. 4) inform the slope stability plan mitigation measures with a debris flow hazard and risk assessment assessing the project-induced debris flow potential of failure of 1) trench spoils and temporary spoils in the temporary ROW and ATWS, and 2) restoration fills which are temporary spoils backfilled to original contour. The risk assessment would consider risks to public safety, resources and infrastructure downslope on NFS lands and non-federal lands. 5) provide surface and subsurface design measures to prevent surface and subsurface flows from destabilizing cut slopes and fill slopes. 6) consider the potential for temporary cuts to become potential slip surfaces for failure of overlying restoration fills, and provide control measures. 7) provide design and construction measures for slope stability on lower slopes in temporary ROW and ATWS near stream crossings. 8) provide design and construction measures for access roads and log landings. Select 9) select BIC incremental controls for stabilizing cut and fill slopes. 10) consider the potential for surface and subsurface drainage from the ROW to destabilize slope outside the ROW, and use this information in the design of surface and subsurface drainage. 11) approval signatures and identification of the geotechnical engineer(s) and engineering geologist(s) who are part of the team that developed the Slope Stability Plan. The Slope Stability Plan includes surface and subsurface measures needed for slope stability. Surface measures, such control of surface drainage, are part of the geotechnical design for slope stability. Because the Slope Stability Plan is the foundation for site stabilization it is important that the ESCP be developed in harmony with the Slope Stability Plan and does not inadvertently undermine the surface and	A new Section 8 (Slope Stability Plan) will be added. Points 1-7 are addressed within the BIC drawings. These will be added as a separate COM Plan attachment. Point 8: Drawings showing improvements to access roads are included in the COM Plan. No log landings are proposed at this time. Points 9 and 10 are addressed within the incremental controls of the BIC attachments that will be included as an attachment to the COM Plan. Point 11 will be addressed with the inclusion of the BIC attachments. Regarding the Excavation and Embankment (Cut and Fill) Plan, see Comment 3 and 145.

144	84	8.3.1	excavation	“In areas where full width topsoil segregation is required (e.g., agricultural areas), an additional 25 feet of temporary construction workspace will be needed on the working side of the corridor to provide sufficient space to store topsoil.” In all areas of excavation and/or stump removal on National Forest land, including the pipe trench and areas of the work space that require cut and fill, the principal means for maintaining and restoring soil productivity is to segregate and stockpile topsoil during construction and replace it upon completion of construction. For the purposes of this project, the material to be segregated is defined as the top 6 inches of the soil, or all actual topsoil, whichever is deeper. We recognize that ACP has identified potential operational constraints related to topsoil segregation in areas of mountainous topography. ACP has indicated that the typical 125-foot-wide construction right-of-way (ROW) is not sufficient in this type of topography to accommodate stockpiled topsoil, and that topographic constraints may not allow stockpiling beyond the 125-foot-wide area. The Forest Service asks that ACP address the following in the COM Plan that would justify and specify the circumstances that would dictate use of alternative methods to protect soil productivity: □ Provide drawings or other descriptions depicting the uses that are currently planned for the 125-foot construction ROW. Include typical dimensions of each use and volumes of stockpiled materials; □ Evaluate the potential for accommodating the anticipated volume of segregated topsoil within the 125-foot ROW and currently planned additional temporary workspace (ATWS); □ Where the 125-foot ROW and planned ATWS does not provide sufficient space for stockpiling topsoil in a separate pile, evaluate the potential for “stacking” segregated topsoil beneath stockpiles of other material, with appropriate markers such as mulch, fabric, or other material to indicate the boundary between topsoil and other material; □ Where the 125-foot ROW and planned ATWS cannot accommodate separate or stacked segregated topsoil, evaluate the need for and feasibility of additional space to accommodate topsoil segregation; and □ In areas where it is not possible to segregate topsoil, provide alternative methods for restoring soil productivity, which may include the use of commercially produced organic material and nutrient supplements. With these circumstances disclosed in the COM Plan, the Forest Service would evaluate actual site conditions during construction on a case by case basis and determine whether alternative soil mitigation measures are to be employed as a variance to the standard soil segregation practice. Segregated topsoil and spoil piles must be protected from erosion. The use of filter socks may be used in conjunction with temporary seeding of the topsoil and spoil piles if material will be left out of the trench and bare for greater than seven days.	See response to Comment 18.
145	84	8.3.1	steep slopes	Document states: “In areas with steep terrain, construction personnel will be required to work in the trench to weld the pipeline. In these areas, the top of the trench will typically be 30 feet wide to provide sufficient space for construction personnel to work in the trench safely. The additional spoil from excavation of a wider trench will be stockpiled in the temporary construction right-of-way and ATWS.” Page 66 states that about 7.9 miles on the GWNF may require blasting. Much of that is on steep slopes. The intersection of steep slopes, blasting, and much wider trenches is a concern for stabilization and downstream effects. Site specific plans for steep slopes should be developed and adequately address stabilization and the downstream effects. The effects of blasting on T&E species, sensitive species, wildlife, etc. need to be evaluated in the EIS.	Atlantic's May 19 and May 24, 2017 letters responded to the FS' May 14, 2017 letter and commit to utilize the Best In Class program on steep slopes. Two site-specific design drawings were provided to the FS on March 23, 2017. Regarding the remaining locations identified by the FS, we will share with them either 1) the site specific design for each slope if applicable or 2) the categorization of the slope and the measures from the BIC program that will be implemented.
146	88	8.5.3	Erosion Control	“erosion control fabric;” Erosion control fabric will not be permitted on NFS Lands. Alternatives may be used with USFS approval.	See response to comment 18. Atlantic proposes to utilize a hydraulically-applied growth media system such as flexterra.
147	88	8.5.3	Seed Mix	“Reseed/replant work areas with native and pollinator species as provided in the Restoration and Rehabilitation Plan (Section 10) and the Visual Resources Plan (Section 20).” USFS Seed Mix guidance document shall be followed on NFS Lands.	Acknowledged.
148	88	8.5.4	Markers	Signs and highly visible flagging will also be used to mark the boundaries of sensitive resource areas, including waterbodies and wetlands, and/or areas with special requirements” Please also mark any areas adjacent to or upslope of occurrences of TES plants as high priority for erosion and sediment control measures, and maintenance of such, to ensure no impact to those populations. Do not identify the species of any TES plants, publicize the existence of TES plants in that area, or create any visible trails to the plants for any reason. Please also mark areas downslope from known NNIS populations that are within the construction area of impact. These should be high priority areas for sediment control and for monitoring, to ensure no NNIS within the construction area are spread via sediment movement either within or beyond the construction area boundaries.	Section 8.5.4, now 9.5.4, will be revised to reflect comment.
149	89	8.5.5	procedures	“The construction entrance must function to remove mud from vehicles and equipment leaving the right-of-way. …The mud will be returned to the right-of-way.” Keeping mud off public roadways is an important goal. This methodology has the potential to mix mud from multiple parts of the construction zone and redistribute that mixed mud in other areas, which, if the mud contains NNIS seeds, would spread NNIS seeds up and down the pipeline. Atlantic would then be responsible for treating all those new areas of infestation. This highlights the importance of pre-treating known NNIS infestations, and cleaning vehicle tires on site immediately after working in an area of NNIS prior to entering any non-infested area either within or outside the project area. At the very minimum, vehicles need to be washed in accordance with Section 11.4.1.2 of this document, and NNIS monitoring and treatment will need to be conducted along all routes to and from such wash stations.	Acknowledged.
150	91	8.5.7	Sediment barriers	“Install temporary sediment barriers at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a road crossing, waterbody and/or wetland until revegetation is complete. Leave adequate room between the base of the slope and the sediment barrier to accommodate ponding of water and sediment deposition. For silt fencing, an effort should be made to locate the fencing at least 5 feet to 10 feet beyond the toe of the slope.” Sediment barriers need to be established where needed, even if slope is <5 %, and not limited to places closer than 50 feet to a road or waterbody. It should be recognized that multiple barriers might be necessary to contain sediment, and basins or sediment traps will need to be maintained and cleaned out as they fill up. Silt fence shall not be used at locations of concentrated overland flow, whether the flow is natural or constructed. Compost filter socks or other controls designed to filter or chemically remove sediment from water shall be used in those locations, subject to FS approval.	Section 8.5.7, now 9.5.7, will be revised to reflect comment.

151	91	8.5.7	Sediment barriers	TES plant populations need to be protected from erosion and overland sediment flow. Please add a bullet point describing how and where sediment barriers will be installed upslope of TES plant populations, and how they will be inspected and maintained. In the process of marking and protecting these areas, do not identify the species of any TES plants, publicize the existence of sensitive plants in that area, or create any visible trails to the plants for any reason. Areas downslope of NNIS populations need to be protected from erosion and overland sediment flow. Please add a bullet describing how and where sediment barriers will be installed downslope of NNIS plant populations, how they will be inspected and maintained, and how sediment suspected to contain NNIS seeds will be handled.	Section 8.5.7, now 9.5.7, will be revised to reflect comment.
152	94	8.5.9	Slope Stability Plan	"A temporary ridge of compacted soil constructed at the top of a sloping disturbed area will be used to divert stormwater runoff from upslope drainage areas away from the unprotected slope." Compacted soil used to create diversion dikes will not consist of segregated topsoil on NFS Lands.	To Section 8.5.9, now 9.5.9, will be added the following: "Segregated topsoil will not be used to create temporary diversion dikes."
153	94	8.5.9	Erosion Control	"Where channel slope is greater than 2 percent, Rolled Erosion Control Product (RECP) will be used to stabilize soil until vegetation is established." RECP will not be used on NFS Lands. Hydraulic mulches or soil conditioners shall be used upon approval by the USFS.	Section 8.5.9, now 9.5.9, will be revised to reflect comment.
154	95	8.5.10	weed-free materials	"The temporary sediment trap will be stabilized immediately following installation with temporary or permanent vegetation." Vegetation seeded on NFS Lands will be free of weeds, invasive species, and other contaminates.	Section 8.5.10, now 9.5.10, will be revised to reflect comment.
155	96	8.5.10	Sediment Removal	"Remove accumulated sediments when sediment reaches ½ the design storage volume. Sediment removed will be deposited in a disturbed area in a manner that it will not erode and cause sedimentation problems." The sediment will be relocated onto spoil piles with the ROW.	Section 8.5.10, now 9.5.10, will be revised to reflect comment.
156	96	8.5.12	excavation	"Because of the increased need for additional right-of-way width and loss of additional forestland, and need to remove stumps, which would increase topsoil mixing with the subsoil and the increase the potential for erosion, topsoil segregation is generally not conducted in forested areas." In all areas of excavation and/or stump removal, including the pipe trench and areas of the work space that require cut and fill, the principal means for maintaining and restoring soil productivity is to segregate and stockpile topsoil during construction and replace it upon completion of construction. For the purposes of this project, the material to be segregated is defined as the top 6 inches of the soil, or all actual topsoil, whichever is deeper. We recognize that ACP has identified potential operational constraints related to topsoil segregation in areas of mountainous topography. ACP has indicated that the typical 125-foot-wide construction right-of-way (ROW) is not sufficient in this type of topography to accommodate stockpiled topsoil, and that topographic constraints may not allow stockpiling beyond the 125-foot-wide area. The Forest Service asks that ACP address the following in the COM Plan that would justify and specify the circumstances that would dictate use of alternative methods to protect soil productivity: □ Provide drawings or other descriptions depicting the uses that are currently planned for the 125-foot construction ROW. Include typical dimensions of each use and volumes of stockpiled materials; □ Evaluate the potential for accommodating the anticipated volume of segregated topsoil within the 125-foot ROW and currently planned additional temporary workspace (ATWS); □ Where the 125-foot ROW and planned ATWS does not provide sufficient space for stockpiling topsoil in a separate pile, evaluate the potential for "stacking" segregated topsoil beneath stockpiles of other material, with appropriate markers such as mulch, fabric, or other material to indicate the boundary between topsoil and other material; □ Where the 125-foot ROW and planned ATWS cannot accommodate separate or stacked segregated topsoil, evaluate the need for and feasibility of additional space to accommodate topsoil segregation; and □ In areas where it is not possible to segregate topsoil, provide alternative methods for restoring soil productivity, which may include the use of commercially produced organic material and nutrient supplements. With these circumstances disclosed in the COM Plan, the Forest Service would evaluate actual site conditions during construction on a case by case basis and determine whether alternative soil mitigation measures are to be employed as a variance to the standard soil segregation practice. ACP shall make every attempt to segregate topsoil from subsoil as best as they can. The FS agrees that it is worth segregating topsoil even if mixing occurs from stump removal for the benefits of salvaging organic material and mineral horizons for revegetation. Ditch plus spoil side segregation can occur on MNF lands, if ACP can provide an alternative soil amendment that meets the intent of the MNF LRMP for soil stabilization and to provide topsoil for revegetation.	See response to Comment 18.
157	96	8.5.12	Topsoil segregation	"Atlantic will conduct topsoil segregation in accordance with the FERC Upland Erosion Control, Revegetation and Maintenance Plan." There is nothing in the FERC plan that mentions segregating topsoil infested with NNIS. Please add that topsoil segregation will also be conducted in accordance with Section 11, the Non-Native Invasive Plant Species Management Plan.	See response to Comment 18.
158	97	8.5.12	Topsoil segregation	"Topsoil shall be uniformly distributed to a minimum compacted depth of 2 inches on 3:1 slopes or steeper slopes and 4 inches on flatter slopes." No intentional compaction of topsoil shall occur on any areas with NFS Lands. On steep slope areas it is important to avoid compaction to allow for infiltration, soil porosity, and ultimately revegetation and slope stabilization.	Section 8.5.12, now 9.5.12, will be revised to reflect comment.
159	97	8.5.12.1	Additional info	These bullet points are very thorough, but it is not clear what they apply to. Please add a heading or explanatory sentence to the preceding paragraph.	Section 8.5.12, now 9.5.12, will be revised to reflect comment.
160	99	8.5.14	steep slopes	Document states: "Atlantic has not proposed, and does not currently anticipate the use of riprap for streambank stabilization on USFS lands." According to the one site specific steep slope design on the GWNF that was provided in the Jan 10, 2017 Revised Site Specific Geohazard Mitigation Design Drawings, this statement is incorrect; there is riprap planned at the base of the slope along the stream channel.	Section 8.5.14, now 9.5.14, will be revised to reflect comment.

161	99	8.5.15	steep slopes	On slopes <5 percent gradient, slope breakers often do not function properly; therefore, slope breakers are not required on slopes less than 5 percent unless field conditions are such that a slope breaker would enhance the temporary or permanent water control. The ACP environmental inspector and the Forest Service representative will coordinate to determine where this is desirable in the field. On slopes between 5 and 30 percent gradient, spacing between slope breakers shall not exceed 100 ft. On slopes having 30 to 40 percent gradient that ACP has identified as moderate to high risk areas for slope failures (based on the Phase 1 and 2 Geohazard Analysis Reports), spacing between slope breakers shall not exceed 50 ft. On all slopes >40 percent gradient, spacing between slope breakers shall not exceed 50 ft. Spacing wider than the requirements stated for any of the above situations requires prior approval from the Forest Service. Conversely, closer spacing of slope breakers is permitted without Forest Service approval where ACP believes additional drainage control is needed.	West Virginia Erosion and Sediment Control plans have been desginged in accordance with WV BMP manual and through direct consultation with WVDEP. Additionally, WV standards are already more stringent than that of the FERC Plans. Therefore, Atlantic believes that the slope breaker spacing is sufficent as designed.
162	99	8.5.15	Slope Stability Plan	"Direct the outfall of each slope breaker to a stable, well vegetated area or construct an energy-dissipating device (silt fence, staked weedfree straw bales, erosion control fabric) at the end of the slope breaker." Silt fence shall not be used at locations of concentrated overland flow, whether the flow is natural or constructed. Compost filter socks or other controls designed to filter or chemically remove sediment from water shall be used in those locations, subject to FS approval.	Section 8.5.15, now 9.5.15, will be revised to reflect comment.
163	102	8.5.17.2	Trench Breakers	"Permanent sacks of sand, polyurethane foam, bentonite clay, or possibly cement bags (in areas of steep terrain) installed around the pipe will remain in the trench to prevent subsurface channeling of water along the trench." No foam shall be used on NFS Lands. Trench Breakers shall be made of sand, bags of concrete mix, or earthen materials (free of contaminates) on NFS Lands.	Section 8.5.17.2, now 9.5.17.2, will be revised to reflect comment.
164	102	8.5.17.2	Formatting	Needs a space between the section number and the title of the section.	The requested change will be made.
165	103	8.5.17.6	Formatting	Needs a space between the section number and the title of the section.	The requested change will be made.
166	104	8.5.17.7	Formatting	Needs a space between the section number and the title of the section.	The requested change will be made.
167	104	8.5.17.8	Formatting	Needs a space between the section number and the title of the section.	The requested change will be made.
168	105	8.5.17.11	slope breakers	"Permanent slope breakers will be installed during final grading…to…prevent sediment deposition into sensitive resources." The transport of water with NNIS seeds would lead to the spread of NNIS which Atlantic would then be responsible for treating. Please describe how NNIS upslope of slope breakers will be treated, how slope breakers and areas downslope of slope breakers will be monitored and treated for NNIS, and/or how slope breakers will be installed in relation to known infestations of NNIS.	Atlantic's proposed NNIS measures include pre-construction treatment, measures taken during construction, and post-construction monitoring/treatment. Any NNIS infestations related to water-borne transport of NNIS propagules along slope breakers can and will be effectively managed within the context of that program; no changes to the COM Plan are proposed.
169	106	8.5.17.11	slope breakers	On slopes <5 percent gradient, slope breakers often do not function properly; therefore, slope breakers are not required on slopes less than 5 percent unless field conditions are such that a slope breaker would enhance the temporary or permanent water control. The ACP environmental inspector and the Forest Service representative will coordinate to determine where this is desirable in the field. On slopes between 5 and 30 percent gradient, spacing between slope breakers shall not exceed 100 ft. On slopes having 30 to 40 percent gradient that ACP has identified as moderate to high risk areas for slope failures (based on the Phase 1 and 2 Geohazard Analysis Reports), spacing between slope breakers shall not exceed 50 ft. On all slopes >40 percent gradient, spacing between slope breakers shall not exceed 50 ft. Spacing wider than the requirements stated for any of the above situations requires prior approval from the Forest Service. Conversely, closer spacing of slope breakers is permitted without Forest Service approval where ACP believes additional drainage control is needed	See response to Comment 161.
170	106	8.5.17.12 & 8.5.17.13	Soil stabilization	Soil stabilization blankets and matting will not be used on NFS Lands. The use of alternatives such as hydraulic mulches, soil tackifiers, soil conditioners, etc. may be used upon FS approval.	The requested changes will be made. See also Comment 18.
171	108	8.5.18	Correction	5 feet per second (ft./sec.). Velocity is measured in cubic feet per second (cfs). Update.	The requested change will be made.
172	108	8.5.18	Erosion Control	Document states: "Any non-biodegradable fabric used for bank stabilization will be removed when vegetation is re-established." Erosion control fabric should be biodegradable material and of the size that does not cause a hazard to snakes or other animals getting trapped in the mesh. See page 144 of the COM plan.	See response to Comment 18.
173	108	8.5.18 to 8.5.19	materials	mechanical protection such as rip-rap. USFS may also require more natural materials, such as logs, root wads, boulders, to be incorporated in addition to just riprap and gabions.	Sections 8.5.19 and 8.9.20, now 9.5.19 and 9.9.20, will be revised to reflect comment.
174	109	8.6	Roads	"The only access roads that can be used in wetlands, other than the construction right-of-way, are those existing roads requiring no modification or improvements, other than routine repair, and posing no impact on the wetland." Evaluate any potential impacts from use and repair of existing roads.	Use and repair of existing Forest roads, which will adhere to FS standards and guidelines and various other best practices as detailed in the COM Plan, including post-use return to pre-construction or better conditions, will have negligible impacts. Atlantic anticipates the Environmental Impact Statement for the Project will also consider this issue.
175	110	8.6	Access	"Where access roads in upland areas do not provide reasonable access, limit all other construction equipment to one pass through the wetland using the construction right-of-way." The best management practice is actually to take equipment back out and around, and approach the project from the next available access point/opposite direction and not have to cross at all.	The single-pass-through approach through wetlands is a standard FERC condition, balancing the need to protect wetlands with allowance to construct the pipeline in a reasonably efficient manner.
176	110	8.6	materials management	Do not side-cast fill material if there is a chance that it will enter a stream, or if side slope exceeds 60 percent. Ensure this meets Forest Plan standards and modify as needed.	Atlantic believes this wording is consistent with FS standards.
177	111	8.6	Formatting	"Virginia Requirements" is an unnumbered bold header. Please number and format consistent with other sections.	The requested change will be made.
178	111	8.6	Correction	10th bullet point under "Virginia Requirements" – change "facility" to "facilitate."	The requested change will be made.
179	113	8.7.2	Formatting	Move the 8.7.2 Steep Terrain and Best in Class (BIC) Program section to the Slope Stability Plan section. (See comment on Section 8.0, page 083)	The requested change will be made.
180	113	8.7.2.1	materials	"drainage improvement that may include providing subsurface drainage at seep locations through granular fill and outlet pipes, incorporating drainage into trench breakers using granular fill, and/or intercepting groundwater seeps and diverting them from the rightof-way;" Please specify in more detail what type of granular fill will be utilized and how it will be utilized.	BIC drawings will be provided showing granular fill material for subsurface drainage at seep locations.
181	113	8.7.2.1	materials	□ "using alternative backfill; □ chemical stabilization of backfill;" Alternative backfill material will need to have FS approval prior to use on NFS Lands. Chemical stabilization material will need to have FS approval prior to use on NFS Lands.	Section 8.7.2.1, now 9.7.2.1, will be revised to reflect comment.

182	114	8.7.2	document agreement	Document states: "The locations where the BIC Program will be implemented are identified on the construction alignment sheets (Attachment A) and on plans developed for a select group of the most challenging and unique steep slopes requiring site-specific designs (Attachment G)." Attachment A is typical drawings of ROW configurations, not alignment sheets. Attachment G is soil survey, not site specific designs.	Atlantic's May 19 and May 24, 2017 letters responded to the FS' May 14, 2017 letter and commit to utilize the Best In Class program on steep slopes. Regarding the locations identified by the FS, Atlantic will provide either 1) the site specific design for each slope, if applicable, or 2) the categorization of the slope and the measures from the BIC program that will be implemented. With the inclusion of a Slope Stability Plan (new Section 8) to the COM Plan, several new attachments will be added, which will be clarified within that Section.
183	114	8.7.2.1	Formatting	Need to add a space in "…(see FiguresA-1/2 through….."	The requested change will be made.
184	115-116	Figures A-1/2, A-3, and A-4	Formatting	Unreadable as currently displayed. Reformat on landscape orientation, and please use only one Figure per page. Consider changing some text/background color combinations for better readability.	The requested change will be made.
185	117	8.7.3	Reference check	After 8.7.3, add back into this version of the COM plan several of the items from pages 101-102 of Draft-1 – references to where other Special Construction Practices are discussed within this documents. In particular, list the ANST HDD crossing, and Roads and Trails Crossings and give current references. This is an important feature in order to make this COM document useful in the field over the life of the construction phase.	The COM Plan contains a table of contents in which the user can find the various topics that may overlap to varying degrees with the Upland Erosion Control Plan. In the interest of minimizing redundancy and length, such information is not included in the individual sections.
186	119	8.11.2	Formatting	Reformat the bold text and spacing of this subsection header to make it make sense.	The requested change will be made.
187	119	8.11.2	Correction	Bottom bullet point on page. Change "to control unauthorized off-road vehicle use" to "to control all types of off-highway vehicle use" for consistency with the Acronyms and Abbreviations page, including the footnote definition on that page.	The requested change will be made.
188	119	8.11.2	Correction	"In no case shall routine vegetation mowing or clearing occur during the migratory bird nesting season between April 15 and August 1 of any year unless specifically approved in writing by the responsible land management agency or the FWS." The mowing/clearing restriction is April 1 – August 31 for West Virginia and March 15 – August 15 for Virginia, as stated on pages 24 and 28 of the Migratory Bird Plan. State the restrictions by state or give a single, encompassing range of March 15 – August 31.	Atlantic will adopt time-of-year restrictions for routine mowing and clearing as specified in the Migratory Bird Plan.
189	119	8.11.2	Clearing	"In uplands, trees and brush will be cleared over the entire width of the permanent right-of-way on an as-needed basis not to exceed once every 3 years" On USFS lands, clearing the entire permanent right-of-way in all upland areas could mean clearing areas that were revegetated with native plants for wildlife habitat restoration and visual aesthetics purposes. As stated in our previous comments on the COM plan, per the USFS's conversation with FERC, and in order to reduce the effects of forest fragmentation on NFS lands and also reduce effects on visual resources, the permanent right-of-way should maintained consistent with FERC's Wetland and Waterbody Construction and Mitigation Procedures (Procedures), for the length of the entire right-of-way on both the MNF and GWNF. Therefore, the ROW would not be cleared for the width of the right-of-way; the permanent right-of-way would be maintained in an herbaceous state for a 10-foot-wide corridor centered over the pipeline. The remainder of the corridor should be replanted with shrubs or shallow-rooted trees as approved by the USFS and in accordance with FERC's Procedures. Please also ensure that equipment and workers' clothing (including boots) is clean of mud, seeds, and other plant parts prior to entering NFS lands to prevent introduction or spread of NNIS, and that NNIS infestations are treated prior to setting seed so that any clearing does not spread them. "permanent right-of-way. stateIn no case"—typo noted.	See response to Comment 62.
190	120	8.12.1 and 8.12.2	Correction	"…the areas disturbed will be returned to their pre-development condition." This statement is incorrect. The current condition is forested, whereas the final condition would be herbaceous cover or in many places likely riprapped. Stormwater management would be substantially changed and this change is accounted for by engineers in the design of bleeder drains and other erosion and sediment control plans to manage runoff. Update sections substantially and prepare stormwater management plans for permitting requirements. On NFS lands, state permit standards or higher level of conservation measures will be required, and post-construction monitoring, including water quality monitoring, will be needed.	Sections 8.12.1 (now 9.12.1) and 8.12.2 (now 9.12.2) will be revised to reflect the comment about pre-development condition. See Comment 278 regarding stormwater permit drawings. The Water Quality Monitoring Plan is now Section 20 of the COM Plan.
191	120	8.13	Erosion and Sediment Control Plan	Virginia Erosion and Sediment Control Law Minimum Standard 16a is in place to minimize erosion and sedimentation, and it will need to be followed. On NFS lands, construction schedules will have to accommodate for this perceived limitation and not get ahead of disturbing areas ahead of schedule to minimize disturbance. The GWNF does not anticipate any variance, due to past issues resulting in major resource damage. A variance would be approved only if it is demonstrated to be in the best interests of the Forest resources. Any such variances would be site specific and very limited in scope, and must be approved on an individual basis by the Forest Service.	The GWNF has indicated it will accept the maximum open trench lengths approved by Virginia Department of Environmental Quality (VDEQ). The following maximum open trench lengths will be proposed in a request for a variance to Minimum Standard 16-a, which will be submitted to the VDEQ, and added to Section 9.13 of the COM Plan: Spread 3A - 1370 feet; Spread 4 - 2423 feet; Spread 4A - 4699 feet; Spread 5 - 4596 feet.
192	120	8.13	trench length	Describe whether or not a variance to open trench length would apply to or be sought on NFS lands.	ACP will request a variance from the Virginia Department of Environmental Quality regarding the 500' trench length restriction. See Comment 191.
193	123	8.14.2	Formatting	case=by-case basis – formatting needs	The requested change will be made.
194	124	8.14.2	Correction	The last 4 bullets are Forest Plan Standards, not Desired conditions, as labeled.	The requested change will be made.
195	125	9.1.1	Correction	"Only two wetlands are crossed; both on the GWNF." This statement is incorrect. Refer to the GWNF and MNF Wetland and Waterbody Survey Reports (Jan 2017), and subsequent USFS filed comments on those reports, for the most up to date information. Update accordingly.	Section 9.1.1, now 10.1.1 will be revised to read "Six wetlands are crossed by the by the construction right-of-way; one on the MNF and five on the GWNF.
196	125	9.2	plan standards	Forest plan standards require a 100ft buffer for perennial waterbodies and thus wetlands. "Site-specific justifications for extra work areas that would be closer than 50 feet from a waterbody or wetland;" are not acceptable to the Forest Service.	Acknowledged.
197	126	9.4	Correction	"The GWNF specifies that construction of crossings is completed on all channeled ephemerals as soon as possible after work has started on the crossing. Permanent and temporary roads on either side of crossings within the channeled ephemeral zone are to be graveled (MNF LRMP SW-24)." This is actually GWNF LRMP SW-24, not MNF	The requested change will be made.
198	127	9.4.2.3	buffer widths	"These buffer widths are 100 feet for perennial streams, and large intermittent streams (i.e. >50 acre drainage areas), 50 feet for small intermittent streams (i.e. <50 acre drainage area) and 25 feet for ephemeral streams." These buffer widths come from the MNF LRMP. On the GWNF, buffer widths for perennial and intermittent streams increase with slope as per Forest Plan Appendix A.	Corrections will be made to Section 9.4.2.3, now 10.4.2.3, as noted. With respect to locating ATWS further than 100' from the water's edge, this would significantly increase the duration of stream crossing construction. Atlantic believes that the impacts of a longer stream crossing construction duration outweigh any theoretical increase in protection that might be afforded by a greater buffer distance.
199	128	9.4.2.3	buffer widths	These buffer widths are the minimum and may be adjusted…	The text will be revised to reflect the comment.
200	128	9.4.2.3	construction	"…dry or frozen and notflowing." Frozen conditions would require winter construction methods, not standard upland techniques.	The text will not be revised. The intent of the wording is to reflect that when a stream is not flowing, whether frozen or simply dry, it will not be crossed as would a normal flowing waterbody, e.g. with a dam and pump or flumed crossing method.
201	128	9.4.2.3	Formatting	case=by=case basis – correct formatting	The requested change will be made.

202	128	9.4.2.4	construction	"… at least 10 feet from the water's edge…" Even for construction crossing, spoils shall be controlled outside of the riparian corridor, at a minimum of 100ft. On the GWNF, this distance increases with slope >10%.	With respect to locating ATWS further than 100' from the water's edge, this would significantly increase the duration of stream crossing construction. Atlantic believes that the impacts of a longer stream crossing construction duration outweigh any theoretical increase in protection that might be afforded by a greater buffer distance.
203	130	9.4.2.7	dry-ditch methods	Document states: "Unless approved otherwise by the appropriate federal or state agency, Atlantic will install the pipeline using one of the dry-ditch methods outlined below for crossings of waterbodies up to 30 feet wide (at the water's edgeat the time of construction) that are state-designated as either coldwater or significant coolwater or warmwater fisheries, or federally- designated as critical habitat." This implies dry ditch method will only be used on coldwater, coolwater, and T&E streams. The DEIS states that dry ditch method will be used at all crossings on FS land. Update COM plan.	The text will be revised to reflect the comment.
204	131	9.4.3	Additional info	Document states: "Use clean gravel or native cobbles for the upper 1 foot of trench backfill inall waterbodies that contain coldwater fisheries." Clean gravel or native cobbles should be used in all waterbodies, not just those with coldwater fisheries. Describe what is proposed for non-coldwater fishery waterbodies. Explain why it would only be used in upper 1 foot of trench backfill, which would seem to be insufficient in the event of scour. Base the depth on the scour analysis for stream crossings.	The following clarification was sent to the USFS with respect to the same comment on the previous draft: *ACP has proposed to comply with the FERC's Wetland and Waterbody Construction and Mitigation Procedures, which require that companies "Use clean gravel or native cobbles for the upper 1 foot of trench backfill in all waterbodies that contain coldwater fisheries." In non-coldwater waterbodies, Atlantic will replace the trench spoil that was excavated from the channel. The Geohazard Program includes a scour analysis that is being performed in the Spring of 2017 and will be included in a revised version of the Geohazard Analysis Report.*
205	133	9.5.3	Clearing	"Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of riparian areas." The mowing/clearing restriction is April 1 – August 31 for West Virginia and March 15 – August 15 for Virginia, as stated on pages 24 and 28 of the Migratory Bird Plan. State the restrictions by state or give a single, encompassing range of March 15 – August 31.	Atlantic will adopt time-of-year restrictions for routine mowing and clearing as specified in the Migratory Bird Plan.
206	136	9.5.3	Clearing	"In uplands, trees and brush will be cleared over the entire width of the permanent right-of-way on an as-needed basis not to exceed once every 3 years" On USFS lands, clearing the entire permanent right-of-way in all upland areas could mean clearing areas that were revegetated with native plants for wildlife habitat restoration and visual aesthetics purposes. As stated in our previous comments on the COM plan, per the USFS's conversation with FERC, and in order to reduce the effects of forest fragmentation on NFS lands and also reduce effects on visual resources, the permanent right-of-way should maintained consistent with FERC's Wetland and Waterbody Construction and Mitigation Procedures (Procedures), for the length of the entire right-of-way on both the MNF and GWNF. Therefore, the ROW would not be cleared for the width of the right-of-way; the permanent right-of-way would be maintained in an herbaceous state for a 10-foot-wide corridor centered over the pipeline. The remainder of the corridor should be replanted with shrubs or shallow-rooted trees as approved by the USFS and in accordance with FERC's Procedures. Please also ensure that equipment and workers' clothing (including boots) is clean of mud, seeds, and other plant parts prior to entering NFS lands to prevent introduction or spread of NNIS, and that NNIS infestations are treated prior to setting seed so that any clearing does not spread them. "non-native invasive species and noxious weeds are absent, unless they are abundant in adjacent areas that were not disturbed by construction." The measure of success should be the net change in NNIS density and diversity in and adjacent to the work zone, pre-construction to postconstruction. A zero or negative delta means success. An increase in NNIS means a negative impact has occurred. If new NNIS are found outside the work zone only subsequent to installation, it is likely that construction had something to do with their introduction, be it through overland flow of seed-containing sediment, workers and animals walking through disturbed areas and carrying seed to undisturbed areas, etc. Also, construction disturbance creates the perfect opportunity for existing NNIS infestations outside the work area to seed into the work area. By the current criteria in the COM plan, a new infestation in the work area adjacent to an existing one outside the work area would be considered an NNIS control success. This defies logic.	Atlantic proposed to maintain the right-of-way in accordance with the FERC's Upland Plans to include mowing 10' centered on the pipeline at a frequency to maintain herbaceous conditions and the remainder of the permanent right-of-way, outside of planted areas, once every three years. Atlantic has concerns with canopy closure over extended reaches with the recommended maintenance protocols. In addition, the stumps left in place on the permanent right-of-way would regenerate the deep rooted vegetation currently present onsite now, which could threaten the integrity of the pipeline coating. Maintaining areas of the right-of-way in shallow rooted trees is not practical as it would require intense hand removal of deep-rooted vegetation in order to maintain a sub-climax forest community in perpituity. Introduction of NNIS to NFS lands by clothing or boots of workers is not expected to be significant and would be addressed by monitoring and treatment proposed in the NNIS plan. Atlantic will monitor and treat NNIS where they occur within the right-of-way and immediately adjacent where project-related activities result in their introduction or spread.
207	138	10.3.1.1	Correction	and seeding (where needed) strike red text	The requested change will be made.
208	140	10.3.1	Formatting	Similar to 8.11.2, please reformat the bold text and spacing of this subsection.	The requested change will be made.
209	140	10.3.1.14	Formatting	10.3.1.5Measures – needs space	The requested change will be made.
210	140	10.3.1.4	construction	"In areas where topsoil segregation occurs, plowing with a paraplow or other deep tillage implement to alleviate subsoil compaction will be conducted before replacement of the topsoil. In rocky or heavily rooted soils, a representative compaction measurement may be difficult to obtain. If compaction testing is impeded by rock or roots, Atlantic will investigate the use of other methods to measure compaction (e.g., use of pocket penetrometer) or may conclude that there is a suitable amount of large material in the soil to rectify potential compaction. Soil compaction will be remediated prior to re-spreading of salvaged topsoil." Employ timber mats or trench spoil to protect underlying soil where possible. Limit the use of heavy equipment on steep slopes to the minimum amount necessary. Use a cone penetrometer to measure compaction on the construction ROW prior to and following completion of construction activities. Post-construction compaction that exceeds pre-construction compaction indicates the need for compaction remediation. On ROW slopes <20% where compaction remediation is needed, use de-compaction techniques such as a ripper, harrow disk, backhoe bucket teeth, chisel plow, or other FS-approved techniques to de-compact travel lanes and any other compacted areas. On ≥20% slopes where compaction remediation is needed and can be accomplished safely and effectively without causing further resource damage, use backhoe bucket teeth, or another safe, FS-approved method, to break up compacted soils.	Section 10.3.1.3, now 11.3.1.3, will be revised to indicate a small tie-in crew will be used on steep slopes, and that soil moisture testing will be done.
211	140	10.3.1.5	Formatting	Needs a space between the section number and the title of the section.	The requested change will be made.
212	140	10.3.1.6	More information needed	"Areas with steep slopes along the pipeline route may make the establishment of vegetation more difficult due to the increased potential for erosion by water. Slopes greater than 35 percent will be restored to natural contours to the extent practicable, or in accordance with specific requests from the USFS." This needs to be more specific. Please specify if "steep slopes" pertain to the side of the slope that construction will take place on OR the flat surface at the peak of a mountain or summit once the top has been removed for pipe installation. This needs to be identified when discussing steep slopes and restoration.	The sentence will be revised to indicate that "steep slopes" includes all slopes that are greater than 30% over 100' or more in any direction.
213	141	10.3.1.6	More information needed	"engineering of the backfill around or within steep slope areas to dry the backfill, add compaction, improve backfill soil strength, and reduce saturation;" More internal discussion needs to occur before a decision is made on compaction with backfill material. However, specific information is needed on depth, location, and degree of compaction are needed to arrive at a decision on this issue on MNF Lands.	The quoted language will be deleted.

214	141	10.3.1.6	More information needed	“installation of targeted structures to stabilize backfill using engineered fill, retaining walls, bagged concrete mix, key trenches, and/or shear trenches; and” More information on the location of where these structures will be utilized is required before a decision can be made on MNF Lands. However, the use of concrete mix and/or retaining walls is not favorable on MNF Lands.	The wording will be changed to "installation of targeted structures to stabilize backfill within trench using engineered fill, retaining walls, bagged concrete mix, key trenches, and/or shear trenches; and…"
215	141	10.3.1.7	materials management	“Instead, materials may include clean straw, wood or paper fiber, coconut fiber, synthetic mulch, or other USFS-approved material that is not likely to contain seeds or viable parts of invasive plants.” The use of synthetic mulch on MNF Lands is not favored.	Reference to synthetic mulch will be deleted.
216	142	10.3.1.8	Equipment	“Unless otherwise specified by the USFS, the seedbed will be prepared in disturbed areas to a depth of 3 to 4 inches using appropriate equipment (e.g., cultipacker roller) to provide a seedbed that is firm, yet rough. Atlantic will imprint exposed soils with a sheepsfoot, landfill compactor, tractor with studded tires, or land imprinter equipment.” The use of a cultipacker roller, sheepsfoot, landfill compactor, tractor with studded tires, or land imprinter equipment will not be used on MNF Lands. This equipment could result in compaction and hindering revegetation in disturbed areas. On steep slopes, leaving the ROW in a rough grade will be acceptable on MNF Lands in addition to other restoration practices such as seeding, mulching, fertilizing, liming, etc.	Reference to use of cultipacker rollers, sheepsfoot, landfill compactor with studded tires, and land imprinter equipment will be deleted.
217	142	10.3.1.8	Equipment	“In compacted areas, additional measures such as chisel plowing or disking may be necessary to improve water infiltration and soil aeration necessary to prepare an adequate seedbed.” Employ timber mats or trench spoil to protect underlying soil where possible. Limit the use of heavy equipment on steep slopes to the minimum amount necessary. Use a cone penetrometer to measure compaction on the construction ROW prior to and following completion of construction activities. Post-construction compaction that exceeds pre-construction compaction indicates the need for compaction remediation. On ROW slopes <20% where compaction remediation is needed, use de-compaction techniques such as a ripper, harrow disk, backhoe bucket teeth, chisel plow, or other FS-approved techniques to de-compact travel lanes and any other compacted areas. On ≥20% slopes where compaction remediation is needed and can be accomplished safely and effectively without causing further resource damage, use backhoe bucket teeth, or another safe, FS-approved method, to break up compacted soils.	Section 11.3.1.8 will be revised to include use of these measures.
218	142	10.3.1.9	Documentation needed	“Provide soil nutrient additions where suggested by soil chemistry or soil fertility data. However, in absence of this data, the USFS recommends the application of 600 – 800 pounds per acre of 10-20-10 (Nitrogen, Phosphorous, and Potassium), 400 pounds per acre of 15-30-15, or 800 -1,000 pounds per acre of10-10-10 fertilizer. Lime will be applied at the rate of 1,500 - 4,000 pounds per acre (pelletized or dust) or 4,000 pounds per acre as hydro Lime.” Documentation of where these came from is needed or this bullet needs to be removed. If data is available from the Order 1 Soil Survey, ACP should always utilize this information for fertilizer application rates.	The requested change will be made.
219	142-152	10.3.1.9 and 10.3.1.10	Formatting	Please reformat and organize the sub-headers in these two sections to add numbering.	The requested change will be made.
220	143	10.3.1.9	materials	“Weed-free straw will be used to preserve the soil base in areas where native salvaged material is not available. In areas that are seeded by drill, Atlantic will apply one bale of clean straw per 1,000 square feet. Where broadcast seeding is used, Atlantic will apply two bales of clean straw per 1,000 square feet, or in accordance with requirements specified by the USFS.” If straw is going to be utilized in certain areas, ACP needs to utilize chopped straw in conjunction with whole straw over top of the chopped straw. This will provide protection against erosion from overland flow and raindrop impact protection.	To Section 10.3.1.10 will be added: "Where straw is utilized, Atlantic will apply whole straw on top of chopped straw to provide protection against erosion from overland flow and raindrop impact protection."
221	145	10.3.1.5	Formatting	10.3.1.5Measures to prevent….Management Plan. Re-Contouring” Re-format	The requested change will be made.
222	147	Table 10.3.1.2	erosion control seed mix	Thank you for following guidance provided by USFS in developing this mix. Please ensure this mix is used in conjunction with temporary erosion control species as was recommended in the USFS documents from which this was drawn, and that initial erosion control seeding contains at least 100lbs of seed per acre, as specified in section 10.3.1.10 on p. 145. Many of the natives are not, on their own, suitable for erosion control, and are only meant to be installed after slope stabilization has been achieved, and then only on areas where slope allows for seeds to be drilled, which enhances native germination. Please ensure this is clarified in the document.	Section 10.3.1.12 will be clarified that natives will be drill-seeded, and are not intended to function as erosion control.. Seeding Table 10.3.1-1 will be revised.
223	148	Table 10.3.1-3	erosion control seed mix	This mix does not reflect the species recommended by the FS in documents submitted in Nov/Dec 2016. Some species are what FS recommended, some are what FS recommended for different types of sites, and some aren’t on any list FS provided. Please work directly with FS contacts to resolve discrepancies. Maintaining the integrity of native genetic stock is a recognized priority in the MNF LRMP, as demonstrated in Goal VE09: Work with researchers, ecologists, geneticists and other interested parties to develop seed zones or breeding zones for native plants. All species that the FS recommended to Atlantic were available in local genotypes from a reputable provider. If different species are to be used other than what was recommended, to ensure consistency with the LRMP, please ensure and demonstrate that they are sourced from local genotypes as per the following: When using native seed, use as local an ecotype as is available, in the following order of preference: □ from within state □ from the mountain regions of an adjoining state from within 100 miles, as long as it is within the Appalachian mountain ecosystem	The seeding tables will be revised, and Atlantic will continue to work with the FS to finalize seed mixes. Section 10.3.1.12 contains the FS' recommended language regarding local seed sources.

224	149	Table 10.3.1-4	erosion control seed mix	This mix does not reflect the species recommended by the FS in documents submitted in Nov/Dec 2016. Some species are what FS recommended, some are what FS recommended for different types of sites, and some aren't on any list FS provided. Please work directly with FS contacts to resolve discrepancies. Maintaining the integrity of native genetic stock is a recognized priority in the MNF LRMP, as demonstrated in Goal VE09: Work with researchers, ecologists, geneticists and other interested parties to develop seed zones or breeding zones for native plants. All species that the FS recommended to Atlantic were available in local genotypes from a reputable provider. If different species are to be used other than what was recommended, to ensure consistency with the LRMP, please ensure and demonstrate that they are sourced from local genotypes as per the following: When using native seed, use as local an ecotype as is available, in the following order of preference: □ from within state □ from the mountain regions of an adjoining state from within 100 miles, as long as it is within the Appalachian mountain ecosystem	See response to Comment 223.
225	151	Table 10.3.1-6	erosion control seed mix	This mix is closer than "FS03" and "FS04", but still does not totally reflect the species recommended by the FS in documents submitted in Nov/Dec 2016. Please work directly with FS contacts to resolve discrepancies. Maintaining the integrity of native genetic stock is a recognized priority in the MNF LRMP, as demonstrated in Goal VE09: Work with researchers, ecologists, geneticists and other interested parties to develop seed zones or breeding zones for native plants. All species that the FS recommended to Atlantic were available in local genotypes from a reputable provider. If different species are to be used other than what was recommended, to ensure consistency with the LRMP, please ensure and demonstrate that they are sourced from local genotypes as per the following: When using native seed, use as local an ecotype as is available, in the following order of preference: □ from within state □ from the mountain regions of an adjoining state from within 100 miles, as long as it is within the Appalachian mountain ecosystem	See response to Comment 223.
226	152	10.3.1.10	Revegetation	Revegetation and Visual Resource-Related Plantings: □ I do not understand the intention behind the second sentence. Restructure, reword, or delete this sentence. It doesn't look like it is really needed. □ Process/Timing Question – There is a future tense for coordination and development of the final revegetation plan pertaining to reducing impacts to scenery. At what stage in this planning process will that occur? Will that take place prior to the COM Plan finalization or will it be developed later (as late as during construction)?	Section 10.3.1.10 will be replaced in its entirety by Section 11.3.1.13, which is based upon FS planting recommendations.
227	152, 196	10.1.1.10 and 20	Revegetation	REVEGETATION & SCENERY: Additional coordination is needed with the USFS regarding the sections of the EIS and COM Plan related to revegetation options to reduce impacts to scenery.	Acknowledged.
228	153	10.3.2.2	Revegetation	Additional Restoration/Mitigation on the GWNF: I'm glad to see the inclusion of monitoring of revegetation in perpetuity for the life of the project on USFS lands. Please include an interval such as at least once every five years; and written reports that include photographs will be submitted to the USFS.	To improve the organization of the section, the discussion of restoration monitoring will be moved to Section 11.4.1. Wording regarding monitoring duration will be revised to read " Post-construction and post-disturbance monitoring for revegetation will be conducted annually for the first five growing seasons following the initial revegetation effort, and at five-year intervals thereafter, for the life of the Project on the [MNF/GWNF] lands. Written reports, including photographs, will be submitted to the [MNF/GWNF] following each monitoring cycle." Additional discussion will be included regarding performance criteria, quantitative and qualitative monitoring methods, and reporting.
229	153	10.3.3	Correction	"Atlantic will restore the banks of waterbodies…" Restore floodplains also.	The requested change will be made.
230	153	10.3.3	restoration of streambank	"…restore stream bank integrity, including both shore crossings up to the ordinary high water mark;…" The streambank includes the area above the OHWM. This section is call riparian restoration – as such it should include the area extending outwards from the streambank a minimum of 100ft, according to the Forest Plans, and often goes far beyond that distance depending on the stream channel type and vegetation type. Restore the floodplain and riparian functioning.	The requested change will be made.
231	153	10.3.3	restoration of streambank	"…in accordance with permit requirements..." Follow recommendations from the geohazard analysis program (hydrotechnical section) also.	Section 11.3.3 will be revised to reflect the comment.
232	154	10.3.4	restoration of streambank	"In accordance with the Procedures…" Follow USACE permit requirements also.	Section 11.3.4 will be revised to reflect the comment.
233	154	10.3.4	Correction	right-of-way Scrub-shrub. Capitalize or check grammar, doesn't read clearly.	Section 11.3.4 will be changed to read: "Any woody vegetation within wetlands will not be allowed to fully reestablish within portions of the permanent right-of-way centered over the pipeline trench
234	154	10.3.5	More information needed	"In areas with exposed bedrock or bedrock, Atlantic will restore the area using crushed rock rather than attempting to revegetate the area." There is substantial exposed bedrock with partial vegetated/shallow overburden on the GWNF, due to steepness of the slopes crossed by ACP. USFS was told that a Best in Class Program would be implemented to stabilize these areas. Expand this section further to describe BIC options other than addition of crushed rock. Clarify what constitutes exposed bedrock. Once the trench/ROW corridor is initially constructed, much of the area will have exposed bedrock. This is concerning, as could this could imply a significant change in existing condition.	Exposed bedrock areas will be treated with Earthguard Fiber Matrix Erosion Control System, which is a hydraulically applied system for slope stabilization and revegetation.
235	155	10.4.1	Restoration Monitoring	Restoration Monitoring: □ Add to final bullet a timeframe of 5-10 years to check on survival of plants. □ Add similar bullet as found at 10.3.2.2 that monitoring for revegetation will be conducted in perpetuity, for the life of the Project on USFS lands. Monitoring activities need to have a stated interval, such as at least once every five years; and written monitoring reports that include photographs need to be provided to the USFS.	Section 11.4 will be revised to reflect that post-construction monitoring for vegetative cover will be conducted annually for the first five growing seasons. If revegetation success criteria are met (see Section 11.4.1.1) monitoring frequency will be reduced to five-year intervals, for the life of the Project on NFS lands. Similar monitoring will be done for activities such as erosion control repair or operations-related activities that require re-seeding. Reporting will be discussed in Section 11.4.1.4.

236	155	10.4.1.2	erosion	"Lack of erosion at a site provides evidence that the soils have been adequately stabilized." This statement needs to be more specific in that lack of erosion can indicate surficial topsoil particle stabilization due to adequate vegetation establishment. Lack of erosion does not indicate slope stabilization or that subsurface stabilization is occurring.	Section 11.4.1.2 will be revised to read "Lack of erosion at a site is one indicator of soil stability."
237	155-156	10.4.1.1 to 10.4.2	Revegetation	Revegetation Performance and Monitoring: Include monitoring of elements provided to reduce impacts to scenery such as vegetative plantings, screenings, feathering techniques, etc.	Section 11.4.1.2 will be revised to add "Photography will also be used to document the success of revegetation as it pertains to reducing impacts to scenery (e.g. vegetative plantings, right-of-way feathering, screening)."
238	156	10.4.1.2	remediation	"Recommendations could also include waiting another year or two prior to any remediation to allow for favorable re-establishment conditions." This will be based off of the severity of the situation that is rendering remediation.	The quoted passage in Section 11.4.1.2 will be revised to add "...based on the judgement of the restoration specialists and the severity of the situation."
239	156	10.4.1.4	Restoration Monitoring	"Reports, including a summary of corrective actions proposed, will be submitted within three months of identifying these conditions. Areas where control applications for noxious weeds are needed will be reported." Three months is too long to delay if monitoring is going to be truly useful for catching and correcting problem areas. There are multiple other places in this document where it is stated that monitoring for erosion control devices etc. will take place on a much more frequent basis and that any problems will be corrected on a much shorter time frame. Restoration monitoring should be conducted so as to be equally effective. Please revise this reporting protocol so that issues observed in the field can be corrected in the same field season, with reasonable time allowed for application and germination of re-seeding, for example, or for treatment of invasive species before they go to seed or senesce.	Section 11.4 will be revised to consolidate the revegetation monitoring discussion. NNIS and erosion control monitoring will be addressed in their respective sections, as they constitue separate (although interrelated) efforts.
240	156	10.4.2	vegetative maintenance	"Atlantic will use mechanical mowing or cutting along their right-of-way for normal vegetative maintenance." Comment: Incorporate time of year restrictions for migratory bird nesting: April 1 – August 31 for West Virginia and March 15 – August 15 for Virginia, or a single, encompassing date range of March 15 – August 31.	Atlantic will adopt time-of-year restrictions for routine mowing and clearing as specified in the Migratory Bird Plan.
241	156	10.4.2	Clearing	"In uplands, trees and brush will be cleared over the entire width of the permanent right-of-way on an as-needed basis not to exceed once every 3 years" On USFS lands, clearing the entire permanent right-of-way in all upland areas could mean clearing areas that were revegetated with native plants for wildlife habitat restoration and visual aesthetics purposes. As stated in our previous comments on the COM plan, per the USFS's conversation with FERC, and in order to reduce the effects of forest fragmentation on NFS lands and also reduce effects on visual resources, the permanent right-of-way should maintained consistent with FERC's Wetland and Waterbody Construction and Mitigation Procedures (Procedures), for the length of the entire right-of-way on both the MNF and GWNF. Therefore, the ROW would not be cleared for the width of the right-of-way; the permanent right-of-way would be maintained in an herbaceous state for a 10-foot-wide corridor centered over the pipeline. The remainder of the corridor should be replanted with shrubs or shallow-rooted trees as approved by the USFS and in accordance with FERC's Procedures. Please also ensure that equipment and workers' clothing (including boots) is clean of mud, seeds, and other plant parts prior to entering NFS lands to prevent introduction or spread of NNIS, and that NNIS infestations are treated prior to setting seed so that any clearing does not spread them.	Atlantic proposed to maintain the right-of-way in accordance with the FERC's Upland Plans to include mowing 10' centered on the pipeline at a frequency to maintain herbaceous conditions and the remainder of the permanent right-of-way once every three years. Atlantic has concerns with canopy closure over extended reaches with the recommended maintenance protocols. In addition, the stumps left in place on the permanent right-of-way would regenerate the deep rooted vegetation currently present onsite now, which would create a hazard for the pipeline coating. Maintaining areas of the right-of-way in shallow rooted trees is not practical as it would require intense hand removal of deep-rooted vegetation to maintain a sub-climax forest community in perpituity. Introduction of NNIS to NFS lands by clothing or boots of workers is not expected to be significant and would be addressed by monitoring and treatment proposed in the NNIS plan. Atlantic will monitor and treat NNIS where they occur within the right-of-way and immediately adjacent where project-related activities result in their introduction or spread.
242	160	11.4	non-native invasive plants	"prevent the introduction and spread of non-native invasive plants from construction equipment moving along the right-of-way;" Please revise to say, "along the right-of-way, ATWS, staging areas, pipe/contractor yards, and temporary access roads." MNF LRMP Goal VE13 states, "For management actions that have been identified by the Forest as likely to cause a negative effect on RFSS populations, negative effects shall be avoided or minimized to the maximum extent practical while still accomplishing the purpose of the project or action. Unavoidable negative effects shall be mitigated to the extent practical and consistent with the project purpose." MNF LRMP Goal VE19 a) states "Work to prevent new infestations of NNIS, with emphasis on areas where species have a high probability for establishment and spread. As stated in ACP's documents, "federal agencies shall not authorize, fund, or carry out actions likely to cause or promote the spread of invasive species… [unless the benefits outweigh the potential harm] and that all feasible and prudent measures…will be taken to minimize the risk of harm." The 64 rare plant species on the MNF, including both known and undiscovered populations along the project corridor, will not receive benefit from the proposed project; therefore it is important that risk of harm be minimized to the maximum extent possible. Therefore to stay in compliance with the MNF LRMP, please demonstrate that all areas on the MNF affected by this project will be covered by plans to control NNIS.	No contractor/pipe yards are located on NFS lands. The other location types mentioned in the comment will be added to Section 11.4, now Section 12.4. The two goals/standards mentioned in the comment will be added added as well. Atlantic believes the document is sufficiently clear that all areas affected by project construction and operations are covered by the NNIS Plan.
243	160	11.4	Correction	"Prior to construction, the EIs will mark areas of [NNIS] plant infestations…Atlantic will…determine whether soil disturbance can reasonably be avoided within infested areas…[ID of these locations] will alert EIs and construction personnel to implement control measures during construction." Please revise to say, "to implement control measures before, during, and after construction." Timber clearing is a major vector for the spread of NNIS, even if there is no additional soil disturbance planned during construction itself. All NNIS infestations in areas that will be cleared need to be treated prior to and following clearing.	The requested change will be made.
244	160	11.4.1.1	Correction	"Prior to clearing and grading operations, pre-treatment of non-native invasive plant infestations may be conducted if it will aid in controlling the spread of non-native invasive plants during construction." Please change the word "may" to "will," as DTI and ACP have committed to treat NNIS as part of the necessary compliance with the MNF LRMP.	The requested change will be made.
245	161	11.4.1.1	Additional info	"Mechanical control (e.g., mowing or disking) can also be an effective control measure for annual species. The efficacy of mechanical control measures is dependent upon proper timing to cut the vegetation prior to the maturation of seed and may require multiple treatments during the growing season." Comment: Same comment as above – Incorporate time of year restrictions for migratory bird nesting: April 1 – August 31 for West Virginia and March 15 – August 15 for Virginia, or a single, encompassing date range of March 15 – August 31.	Atlantic will adopt time-of-year restrictions for routine mowing and clearing as specified in the Migratory Bird Plan.
246	161	11.4.1.1	mechanical control	"Mechanical control (e.g., mowing or disking) can also be an effective control measure for annual species." Potentially true, but soil disturbance can also stimulate germination of disturbance-adapted invasives, especially those with long-lived seed banks such as Japanese stiltgrass. Please only conduct mechanical control on USFS lands in coordination with USFS.	Section 12.4.1.1 will be revised to reflect the comment.
247	161	11.4.1.2	wash stations for equipment	"Atlantic will install wash stations for construction equipment near the entrance and exit points of each contiguous USFS tract, outside the Forest boundaries." Thank you. Please ensure the routes to the wash stations (that dirty machinery would have taken) are marked for post-construction NNIS follow-up and treatment.	Since any "routes" taken by unwashed vehicles/equipment would be located off NFS lands, and would be within approved work areas, all of which will be subject to NNIS monitoring/treatment as appropriate, it does not appear necessary to add any language to the COM Plan.

248	162	11.4.1.3	non-native invasive plants	COM Plan says: “and to treat areas of the right-of-way where, in comparison to adjacent areas, non-native invasive plant species form a significant portion of the vegetation community.” Comment: It is not clear how the ROW will be compared to the adjacent areas, and what constitutes a “significant portion” of the vegetation community. What metrics will be used? It would be better to treat non-native plant species in the ROW regardless of the status of adjacent areas. In fact, if there are sources of infestation near the ROW, those should be treated also and before construction occurs.	Atlantic will monitor and treat NNIS where they occur within the right-of-way and immediately adjacent where project-related activities result in their introduction or spread. Where NNIS occur densely in areas adjacent to the right-of-way, treatment within the right-of-way is not expected to reduce the density in the area, thus re-establishment of NNIS is probable (i.e., treatment of NNIS within and adjacent to the right-of-way in areas where NNIS are heavily infested for great expanses is not feasible).
249	162	11.4.1.3	non-native invasive plants	COM Plan says: ongoing revegetation and monitoring efforts will ensure adequate vegetative cover to discourage the establishment of non-native invasive plant species. The USFS will make the determination of adequate cover on NFS lands.	Dominion has proposed revegetation performance criteria in Section 11.4.1.1. No changes have been made in response to this comment.
250	162	11.4.1.3	Additional info	“Following construction, the ACP Project area will be monitored in accordance with the Plan and Procedures.” Taken together, the Non-Native Invasive Plant Species Management Plan (COM Plan Section 11), the Restoration and Rehabilitation Plan (COM Plan Section 10), and the Upland Erosion Control, Revegetation, and Maintenance Plan (“the Plan”) state the following plans for NNIS monitoring: • post construction monitoring and treatment will continue until the density and cover of non-NNIS species is similar to nearby non-forested, undisturbed lands, and until NNIS and noxious weeds are absent unless they are abundant in adjacent undisturbed areas. (Non-Native Invasive Plant Species Management Plan) • “post-construction and post-disturbance monitoring should be conducted in perpetuity, for the life of the project on USFS lands”, “Qualitative monitoring will be conducted in years 1 to 5”, and quantitative monitoring (via random quadrat sampling in consultation with USFS) would be done in year 3. “Reports, including a summary of corrective actions proposed, will be submitted within three months of identifying these conditions. Areas where control applications for noxious weeds are needed will be reported.” (Restoration and Rehabilitation Plan) • “Conduct follow-up inspections of all disturbed areas, as necessary…at a minimum…after the first and second growing seasons.” (Upland Erosion Control, Revegetation, and Maintenance Plan) Early and effective treatment is the most cost-efficient approach to deal with existing invasives. However, the sum of the guidance provided by these documents is insufficient for effective control. Invasive species need to be treated in the same growing season as the infestation is discovered, in sufficient time to apply treatment(s) such that plants are prevented from setting seed that season. For some species, this means treatment before flowering (as early as April for garlic mustard). Other species such as Japanese knotweed and Japanese stiltgrass require a minimum of two treatments in the same growing season for effective control. Herbaceous species also emerge at different times of the growing season, some as early as March, others as late as June. A once annual monitoring visit and a 3-month delay in reporting is inadequate to effectively treat invasive species. Appendix J of the COM plan describes each NNIS species and its optimal treatment timeframe and method, with timeframes ranging from early spring to late fall. Please use this to develop a plan to conduct annual NNIS monitoring and treatment at appropriate times of the year for each species. Please model the NNIS reporting and monitoring plan after the ESCP plan, section 8.10 of this document, the monitoring and reporting plan for wetlands, section 8.11.2, and the quantitative monitoring methods for restoration, section 10.4.1.3. Please provide more details re: how often monitoring and reporting will be conducted for the remainder of the life of the project on USFS land, after year 5. When a sufficiently detailed plan for monitoring and treatment is developed, please add those details to COM plan sections 10 and 11, the SWP Evaluation report, the BA, and the DEIS. These important details need to be accessible to the reader in one place in order to understand and evaluate Atlantic’s NNIS strategy.	The following will be added to the NNIS Plan (Section 12): "Following construction, construction work areas on NFS lands will be monitored for NNIS. Monitoring will be done in the spring, late enough to facilitate weed species identification, but early enough to allow for treatment at the appropriate time. Supplemental monitoring visits will be conducted as necessary for NNIS species that emerge later during the year. Within fifteen days of completion of the monitoring, Atlantic will prepare a preliminary report identifying NNIS locations and recommendations for treatment, which will be sent to the Forests for approval. Upon FS approval, treatment will be carried out that same season. Attachment J identifies the primary and alternative treatment methods for NNIS. The primary and/or alternative treatment method will be used based on the growing stage and prevalence of the non-native invasive species. Atlantic will submit an annual summary report of the year’s monitoring and treatment of NNIS, during the first quarter of the following year. This annual report may be combined with reporting on efforts to monitor and remediate for erosion control and revegetation." "Atlantic will continue NNIS monitoring and treatment for five years following completion of construction on a given spread." Also, Atlantic will offer monetary payment for long-term FS monitoring of NNIS.
251	163	11.4.1.3	Mechanical treatments	“Mechanical treatments will be conducted prior to seed maturation where required.” Comment: Same as above – Incorporate time of year restrictions for migratory bird nesting: April 1 – August 31 for West Virginia and March 15 – August 15 for Virginia, or a single, encompassing date range of March 15 – August 31.	Atlantic will adopt time-of-year restrictions for routine mowing and clearing as specified in the Migratory Bird Plan.
252	163	11.4.1.3	Correction	COM Plan says: Applications will be controlled to minimize impacts on surrounding vegetation. Herbicide treatment methods will be based on species-specific and area-specific conditions as described above and will be coordinated with the USFS as applicable. Use of herbicides is not currently a proposed action of this project on Forest Service lands. Types of herbicides proposed to be selected and effects of herbicide use has not been analyzed in the EIS or related BA, BE, or locally rare reports. Any use of herbicide or pesticide on Forest Service lands requires NEPA analysis. Present NEPA documents covering herbicide/pesticide use on Forest Service lands do not include this proposed project. Comment: delete “as applicable”, treatments will be coordinated with the USFS.	The requested change will be made.
253	163	11.4.1.4	non-native invasive plants	COM Plan says: NNIS control measures shall be considered successful if upon visual survey the density and cover of non-NNIS are similar in density and cover to nearby non-forested, undisturbed lands. NNIS and noxious weeds are absent, unless they are abundant in areas that were not disturbed by construction. Comment: This implies that if there are non-native invasive plant species in the vicinity of the ROW then no action will be taken. This is unacceptable. ROWs are potential corridors for the spread of non-native invasive plants. Infestations in the ROW will be treated.	Atlantic will continue to coordinate with the FS regarding treatment of NNIS infestations caused or exacerbated by the ACP.
254	163	11.4.1.4	non-native invasive plants	COM Plan says: Atlantic will continue NNIS monitoring and treatment until the conditions articulated above are achieved. Atlantic’s operations staff will monitor and treat non-native invasive plant species as part of its normal operations and maintenance activities in accordance with applicable USFS regulations. Comment: The FS will determine when the treatments are adequate.	Dominion has proposed NNIS performance criteria in Section 12.4.1.4. No changes have been made in response to this comment.
255	163	11.4.1.4	non-native invasive plants	“Following construction, non-native invasive plant infestations will be monitored as part of Atlantic’s restoration monitoring activities as described in the Restoration and Rehabilitation Plan.” The Restoration and Rehabilitation Plan states: “post-construction and post-disturbance monitoring should be conducted in perpetuity, for the life of the project on USFS lands”, “Qualitative monitoring will be conducted in years 1 to 5”, and quantitative monitoring (via random quadrat sampling in consultation with USFS) would be done in year 3. “Reports, including a summary of corrective actions proposed, will be submitted within three months of identifying these conditions. Areas where control applications for noxious weeds are needed will be reported.” A once annual monitoring visit and a 3-month delay in reporting is inadequate to effectively treat invasive species. See comments re: 11.4.1.3.	See response to Comment 250.

256	163	11.4.1.4	non-native invasive plants	"NNIS control measures shall be considered successful if…NNIS and noxious weeds are absent, unless they are abundant in areas that were not disturbed by construction." The measure of success should be the net change in NNIS density and diversity in and adjacent to the work zone, pre-construction to postconstruction. A zero or negative delta means success. An increase in NNIS means a negative impact has occurred. If new NNIS populations are found outside the work zone subsequent to construction, it is likely that construction had something to do with their introduction, be it through overland flow of seed-containing sediment, workers and animals walking through disturbed areas and carrying seed to undisturbed areas, etc. Also, construction disturbance creates the perfect opportunity for existing NNIS infestations outside the work area to seed into the work area. By the above-stated criteria in the COM plan, a new infestation in the work area adjacent to an existing infestation outside the work area would be considered an NNIS control success. Please revise.	Atlantic will continue to coordinate with the FS regarding treatment of NNIS infestations caused or exacerbated by the ACP and the appropriate measure of success.. Construction practices/monitoring/treatment are designed to minimize/mitigate NNIS new or expanded NNIS infestations. Atlantic will monitor and treat NNIS where they occur within the right-of-way and immediately adjacent where right-of-way and project-related activities result in their introduction or spread. Where NNIS occur densely in areas adjacent to the ROW, treatment within the right-of-way is not expected to reduce the density in the area, thus re-establishment of NNIS is probable (i.e., treatment of NNIS within and adjacent to the right-of-way in areas where NNIS are heavily infested for great expanses is not feasible).
257	163	11.5.1	Herbicide application	COM Plan says: Herbicide application will be conducted in accordance with applicable laws and regulations by a licensed contractor. Use of herbicides is not currently a proposed action of this project on Forest Service lands. Types of herbicides selected and effects of using herbicides has not been analyzed in the EIS. Any use of herbicide or pesticide on Forest Service lands requires NEPA analysis. Present NEPA documents covering herbicide/pesticide use on Forest Service lands do not include this proposed project. Comment: add "LRMP Standards" to applicable laws and regulations	The requested change will be made.
258	164	11.1.00	non-native invasive plants	"Atlantic will provide USFS with a treatment schedule once the Project nears the construction timeframes." It is neither necessary nor desirable to wait that long. The timing of monitoring and treatment for NNIS depends on species' biology, not construction timeframes. Pre-clearing and pre-construction treatments may need to begin months in advance to be effective. Waiting to develop an NNIS treatment schedule may mean that treatment windows are missed, and Atlantic will need to spend more money later on follow-up applications. Appendix J of this COM plan describes each NNIS species and its optimal treatment timeframe and method, with timeframes ranging from early spring to late fall. This is sufficient to develop an annual NNIS monitoring and treatment schedule for each species that could start being applied even before exact construction timeframes are finalized. Please develop this plan and provide it with the next iteration of the COM plan.	The timing of pre-construction NNIS treatment on NFS lands is dependent upon the receipt of Notices to Proceed (NTP) with construction from the FS and FERC. As stated in section 12.7, Atlantic will be able to develop a pre-construction treatment schedule nearer to construction, when Atlantic is better able to estimate the timing of NTP receipt. Treatment will commence as soon as practical upon NTP receipt.
259	166	12.4.1	Staging areas	Staging areas and facility sites for hazardous materials storage, overnight parking, and refueling and servicing of machinery, etc., should not be located upslope of any TES plants where runoff or spills could possibly impact them.	Section 12.4, now 13.4, will be revised to reflect the comment.. Also, unnecessary subsection divisions in Section 13.4 will be eliminated.
260	170	12.6	Spills	The FS previously commented on the following, but no change was made in the COM Plan: "Atlantic's environmental team will report the spill to the MNF or GWNF, as appropriate, as well as the applicable state regulatory agencies if the spill meets or exceeds a reportable threshold. Table 12.6-1 lists the Federal and State/Commonwealth agencies that would be contacted if a spill meets or exceeds a reportable threshold." Any and all spills on USFS lands, regardless of whether they meet a 'reportable threshold' will be reported to the MNF or GWJNF. Consult with the USFS for reporting requirements.	The requested language will be added to Section 12.6, now 13.6, and a footnote will be added to Table 13.6-1.
261	170	12.6	spills	"Atlantic's environmental team will report the spill to the MNF or GWNF, as appropriate…if the spill meets or exceeds a reportable threshold." Please report all spills to the MNF or GWNF, as appropriate, that occur upslope of a marked location of a TES plant population.	Per Comment 260, all spills on NFS lands will be reported to MNF or GWNF.
262	182	14.0	post-construction	The COM plan should address Forest LEI concerns involving Post-Construction issues. These issues overlap with cultural resource concerns in that several archaeological sites once protected from collecting will now have uncontrolled access via the pipeline corridor if proposed construction occurs. Furthermore, LEI concerns involving poaching, illegal ATV-OHV usage, ARPA violations, dumping, and other illegal activities will increase utilizing the pipeline corridor. A plan for monitoring involving both USFS LEI and Heritage personnel will be provided by the USFS and included in the COM plan. For Heritage an incremental or phased monitoring plan of the archaeological resources located adjacent to the proposed corridor is necessary and will be implemented by USFS archaeologists to meet SHPO and THPO programmatic agreement demands. LEI concerns covering a constant monitoring of the areas will need to be implemented to ensure public safety and protection of forest resources. Monitoring of forest and cultural resources will be conducted by the USFS and funded through cost recovery.	Atlantic is awaiting information from FS regarding this matter.
263	184	15.0	biological Evaluation	COM Plan says: Information on threatened and endangered plants and animals as well as USFS species of concern is contained within the Biological Evaluation submitted to the USFS in November, 2016 and an updated report is scheduled to be filed in February, 2017. The Biological Evaluation is incorporated by reference into this COM Plan. Comment: The Biological Evaluation will analyze effects to species on the Regional Forester's Sensitive Species list. Federally listed species will be analyzed by a Biological Assessment. Please clarify the difference between the two documents. This comment has been made befo	Section 16 will be revised to reflect the comment.
264	188	17.1.00	signs	"Prior to construction, ACP will work with both Forests to identify specific road or trail closures or detours necessary… On roads and trails that cross the pipeline right-of-way, ACP will post temporary signs informing road and trail users of any closures, detours, or other restrictions associated with crossing the construction zone." No trails should be routed in a way that will direct the public near TES plant populations, and no sign should contain information about sensitive botanical resources.	Additions will be made to two bullet points within Section 18.4.
265	190	18.3	Roads	Add "and trails" after "roads" in this paragraph. Please see our previous comments on the COM Plan.	The requested change will be made.
266	191	Table 18.3-1	Additional info	Add GWNF trails (total of 5 trails) into this chart. These are known required OHV blocking locations.	Four trails will be added to Table 18.3-1, now Table 19.3-1. The fifth trail referred to in the FS comment may be the Appalachian National Scenic Trail, which will be drilled and does not warrant OHV blocking measures.
267	192	18.4	Blocking measures	Blocking Measures for ATVs/OHVs: □ I do not understand how the "utilize existing vegetation" blocking method would work – if it allows for the passage of maintenance vehicles, it seems it would allow for the passage of ATVs and/or OHVs. Please improve on the description or provide a simple graphic that demonstrates how this would work. □ For gated areas that allow for foot traffic (hunting and other dispersed recreation), a clear passage for wheelchairs is required to meet federal accessibility guidelines.	Since all roads on NFS lands will be open cut, the "utilize existing vegetation" measure, appropriate for bored crossings, will be deleted from Section 19.4. A sentence will be added to one of the bullet points in Section 19.4 regarding wheelchair accessibility.
268	192	18.5	OHV monitoring	OHV monitoring should be ongoing by ACP personnel with reporting of findings to USFS for the life of the permit/project.	The COM Plan provides that after two years of on-ground monitoring, monitoring will be accomplished via the routine aerial patrols, which occur for the life of the project. To Section 19.5 will be added: "Any observation of changed conditions that may require corrective action will be conveyed in writing to the FS and followed up with discussions with the appropriate FS resource specialist to determine a course of action."

269	192	18.5	post-construction	Post-Construction Monitoring: In the second paragraph, add the phrase "in perpetuity: "After two years, the locations will be monitored periodically, in perpetuity, by USFS and pipeline operations staff…."	To Section 18.5, now 19.5 will be added "for the life of the project", rather than "in perpetuity".
270	193	19.0	stream crossings	Atlantic will install stream crossings in accordance with the FERC Procedures and USACE permitting requirements	The requested change will be made.
271	193	19.0	water quality monitoring	The purpose of this plan is to describe how water quality monitoring activities will be conducted on USFS lands where stream crossings are planned. Please also address water quality monitoring at bleeder drain outlets.	Atlantic does not anticipate enough flow from the bleeder drains to reliably conduct water quality monitoring. In addition, Atlantic does not anticipate chemical consituents to be associated with ephemeral discharge at the bleeder drains, therefore Atlantic does not believe that water quality monitoring is necessary at these locations.
272	193-195	19.1-19.6	water quality monitoring	Only West Virginia has numeric standards applicable to turbidity. Consider also Virginia's benthic macroinvertebrate standards. That is in essence a surrogate for turbidity impacts. Update the following sections to account for macroinvertebrate standards as well.	Atlantic proposes to use the WV turbidity standard in both WV and VA to monitor direct and real-time effects to streams during crossings and believes that this monitoring would be protective of the macroinvertebrates, and is an acceptable means of monitoring water quality.
273	194	19.4	water quality monitoring	Document states: "Measurements of turbidity will occur at all stream crossings that are state-designated as either coldwater or significant coolwater or warmwater fisheries." The Water Quality monitoring plan only includes turbidity monitoring and only "at all stream crossings that are state-designated as either coldwater or significant coolwater or warmwater fisheries" for 4 days following construction. This does not address chronic impacts. Downstream turbidity monitoring during and following construction is good, but Monitoring needs to include the physical and biological stream condition post construction for a number of years. It also needs to include streams other than those designated as cold water or significant cool and warm water fisheries. It is unclear exactly which streams will be included in this monitoring. Please provide a list. Several streams that are crossed on FS land are tributaries to coldwater streams and should be included in this list.	Atlantic will comply with West Virginia and Virginia standards related to water quality. Erosion control devices will be monitored and any deficencies will be corrected. Chronic impacts will be addressed through monitoring of erosion and sediment controls. State monitoring plans trigger action should an exceedance be documented.
274	196	20.2	restoration	"Atlantic is also considering active replanting of the outer most 20 feet…with a combination of indigenous tree and shrub seedlings (Figure 20-2). If replanting is conducted, tree and shrub species [and] seed stocks…will be selected based on availability within the project area, as well as with consultations with USFS staff." Thank you for considering this restoration measure. If done correctly it has the potential to benefit many resources. Figure 20-2 only shows a diagram of the planting layout, and does not provide any species lists. In keeping with the MNF LRMP, please do consult with USFS to develop lists of site-appropriate native species, sourced from genetically local stock, that are likely to thrive with minimal to no follow-up care. "Atlantic would monitor the planted area…but would not plan to actively monitor or mange…" Fix typo.	A new Section 11.3.1.13 (Tree and Shrub Planting) will be added to detail planting measures. The typo will be corrected.
275	196-199	20.1 to 20.2 and figures 20-1 & 20-2	Clearing	Feathering Vegetation Clearing on the Right-of-Way: The definition of feathering needs to include that it results in a mixed density and mixed height of trees and shrubs to reduce the strong contrast of the vegetative edge of the corridor. I do not agree that this technique, particularly if only employed in the construction r-o-w, will be sufficient to reduce impacts to scenery at certain road crossings, trails, and areas visible in the middleground viewed from the ANST. Additional coordination is needed with the USFS regarding the sections of the EIS and COM Plan related to revegetation options to reduce impacts to scenery.	Vegetation left standing in the uncleared salients into the construction right-of-way will contain whatever vegetation exists there, not just large trees, as the comment seems to suggest. In addition, the stumps left in place on the permanent right-of-way would regenerate the deep rooted vegetation currently present onsite now. Atlantic will continue to consult with the FS regarding the feathering of the right of way. The figures in Section 21 will be revised to show a 50-foot permanent right-of-way. See response to Comment 62.
Attachment A					
276	n/a	Attachment A	Misc	The configuration "Atlantic Coast Pipeline and Supply Header Projects Cut and Fill Construction" contains this Note: "1. TWO-TONE THE RIGHT OF WAY TO LIMIT THE NEED FOR DEEP CUTS AND ADDITIONAL RIGHT OF WAY ON STEEP SOILS." Provide a detailed description of the Two Tone configuration and how it differs from standard working side/spoil side configuration. A FERC DEIS displays a Typical Two-Tone Construction Right-of-Way (FIGURE: 2.3.2-2, page 2-22, FERC, 2006b, Draft Environmental Impact Statement for the Carthage to Perryville Project, May 26. Available at http://www.ferc.gov/industries/gas/enviro/eis/2006/05-26-06.asp.). The FERC DEIS Typical Two Tone has a different configuration from the ACP Two Tone configuration. Explain the reason for the difference. The FERC DEIS states, "The two-tone construction technique would likely require extra workspace areas to accommodate the additional volumes of fill material generated by this technique (see Section 3.8). Following pipeline installation and backfill of the trench, excavated material would be placed back in the cut and compacted to restore the approximate original contours." Provide site specific locations where ACP would use the two tone method on NFS lands, including every location where ATWS would be needed. Provide a set of profiles (cross-sections) with dimensions (feet) based on lidar or detailed survey for each two tone segment on each Alignment Sheet in Attachment B. Another Note states, "4. USE BACKHOE TO ASSIST BULLDOZERS WITH REPLACING CUTS. RECONTOUR TO MAXIMUM 1:3 GRADE UNLESS OTHERWISE DIRECTED BY GEOTECHNICAL ENGINEER." Clarify if this note refers to recontouring cuts to a maximum 1:3 or maximum 3:1. If it is meant to recontour to 3 horizontal to 1 vertical, justify the use of such low-angle to recontour a vertical cut as deep into the mountainside as shown in two tone configuration in Attachment A. Since Note 1 justifies the two tone method for use on steep slopes, explain the circumstances when "recontouring" a cut into a 3 horizontal to 1 vertical slope would be justified for the two tone configuration displayed in Attachment A. The excavation for a 3:1 slope would extend upslope beyond the additional ROW boundary, regardless of whether the 3:1 "recontour" begins at the base of the vertical cut or far to the left at the intersection of the natural grade and the horizontal workspace and regardless of using a combination of cut-and-fill to create a 3:1 slope. The excavation for a 3:1 slope would extend upslope beyond the additional ROW boundary, regardless of whether the 3:1 "recontour" begins at the base of the vertical cut or far to the left at the intersection of the natural grade and the horizontal workspace and regardless of using a combination of cut-and-fill to create a 3:1 slope. Explain how a 3:1 slope could be justified in the two tone configuration displayed in Attachment A. The left side of the configuration shows a spoil and fill placed on a 60% natural slope grade. The fill slope has an unrealistically steep slope grade (overall slope of about 65 degrees or 200% or 1/2:1) with a vertical slope as the base of the fill slope. The fill slope shown would be unstable and likely to result in a massive fill slope failure. The instability of the fill slope is increased by placing the added weight of a spoil pile on top of the fill. If the fill slope were drawn at a realistic slope grade, such as 1.5:1 or 2:1, the fill would extend downslope far beyond the additional ROW boundary. The same type of unstable fill slope is shown perched above the top of the cut on the right side of the configuration. If one uses the "Standard R.O.W. Width" as a scale for 125 feet, there are other distortions, such as a 22 feet deep trench. While Note 4	Atlantic will revise the typical drawings. Locations where two-toning will be required will be determined in field by the construciton contractor.

				directs recontouring, there is no profile showing the reclaimed ground surface. For example, does the fill on left side remain in place as part of reclamation or does equipment scoop the fill up and use it as backfill over the cut as part of reclamation. What is the practicality and extent of reach to retrieve fill placed on a 60% natural slope grade? Overall, the two tone configuration in Attachment A is a misleading and erroneous conceptual configuration. Replace this configuration in Attachment A with a profile (cross-section) with dimensions (feet) based on a lidar or ground survey and display 1) the original ground surface, 2) the maximum extent of the cut, fill and spoil during construction, 3) the post-construction reclaimed ground surface. Provide a	
277	04 to 10	Attachment A	diagram correction	These 7 diagrams show a 50' dimension as distance from live streams to ATWS areas. Per page 23, section 2.1.9.1, 4th paragraph, this dimension should be a minimum of 100' either side of all live streams.	Atlantic will revise the alignment sheets to show the proper ATWS setback.
				Attachment B	
278	n/a	Attachment B	Erosion and Sediment Control Plan	Attachment B provides the alignment sheets for the pipeline route. Within these sheets, there is a list of notes 1-7. Number 6 states that, "These drawings are not intended to provide erosion and sedimentation control requirements. See erosion and sediment control plans for complete requirements and BMP location." The FS has not seen the erosion and sediment control requirement plans for construction which include the placement of E&S controls and BMP control locations along the pipeline route on NFS Lands. These plans should include identification of areas that are > 40% slope, wetlands, streams, riparian areas, mileposts, environmentally sensitive areas, construction entrances, sensitive species locations and buffers, and all E&S controls and BMP controls (i.e., trench plug locations, timber mats, ATWS, temporary workspaces, permanent workspaces, filter socks, slope breakers, bleeder drain outlets, etc.) drawn to scale.	Erosion control drawings for the West Virginia (MNF) portion of the right of way have been provided to the FS. Drawings for the Virginia (GWNF) portion will be provided after they have been filed with Virginia Department of Environmental Quality.
279	n/a	Attachment B	Alignment sheets	Attachment B is the Alignment Sheets for the proposed pipeline route. Several comments: □ Similar to the Access Road Improvement Map Sheets of Attachment 5, use of the fall-color and leaf-off background imagery is confusing and distracting. □ Property boundaries and property ownerships are difficult to identify. □ Mileposts (location of this sheet within the broader context of the overall pipeline) are difficult to see. □ Ownership information does not include identification of landowner by name, and it needs to, at least for the USFS. □ Diagrams in this attachment refer to "Extra Work Space" – clarify if this is the same as or different than "Additional Temporary Work Space (ATWS)" as labelled and described everywhere else throughout the COM plan and attachments □ All sheets show certain areas of "Extra Work Space", presumably for topsoil segregation. As previously stated – please determine whether full topsoil segregation is required on all USFS lands or on all GWNF lands and revise diagrams accordingly – including corridor width and ATWSs. □ ALL Alignment Sheets need to be modified to include readable Road Numbers (US-##, VA-##, SR-##, FR-##, etc). This comment was made on Draft-1 and not incorporated. □ Alignment Sheets need to show and identify all Forest Trails (Name and Forest Trail ## (FT-##) crossed by and adjacent to the proposed pipeline route. Total of 5 Forest Trails on the GWNF. This comment was made on Draft-1 and not incorporated. □ Sheet 127 of 344 shows 2 proposed access roads, including one (36-014.AR3) that runs right up Laurel Run, is unacceptable to the USFS, and which ACP has promised not to use. Please remove this from all sheets to avoid confusion. □ These Alignment Sheets appear to show ATWS in many locations at 50' from live streams. Per page 23 of COM Plan, all ATWS must be a minimum of 100' from live streams. Revise / change this throughout. □ Sheets 198 and 199 of 344, change "Appalachian Trail" to "Appalachian National Scenic Trail" throughout. □ Sheet 198 of 344: label Blue Ridge Parkway.	Alignment sheets will be updated. Landowner names will not be shown on alignment sheets; however, NFS lands will be identified.
280	n/a	Atttachment B	Alignment sheets	□ If it doesn't already exist (I didn't find it, but maybe missed it), provide a crosswalk table or index that shows Alignment Sheet Drawing Numbers, PI Stations and ACP Mileposts. □ Add the MNF and GWNF boundaries to the alignment sheets. □ Add name labels to all public roads that appear on the alignment sheets.	A table will be provided with alignment sheet numbers, PIs, and MP that show FS boundaries.
281	n/a	Alignment Sheets (general)	Alignment sheets	1) Provide vicinity map(s) for alignment sheets either as insets into map sheets or as separate overview maps in order to more easily find where the alignment sheets are located. 2) Add milepost references to alignment sheets in order to match up locations described in the COM plan with where they are on the alignment sheets. 3) Add Forest Service tract numbers to the property ownership labels. 4) update alignment sheets with accurate NFS boundaries based on field boundary surveys and locations (reference: 12/19/2016 USFS letter to FERC regarding Surveys of Property Boundaries on NFS Lands). 5) provide alignment sheets for new access roads and existing roads proposed for reconstruction/ improvement.	1) See resposne to Comment 281. 2) Mileposts are shown on alignment sheets. 3) Forest Service tract numbers will be added. 4) Alignment sheets will show FS boundaries based on most current civil surveys. 5) Attachment F shows access road improvements.
282	n/a	Attachment B Alignment Sheets	Maps	Most people do not use county tax maps to locate themselves. Maps should clearly show MNF lands. Map groups should be separated by the MNF and GWJNF.	See response to Comment 281.
				Attachment C	
283	n/a	Attachment C	Slope Stability Plan	The Slope Stability Policy and Procedure for Pipeline Design, Construction and Right of Way Maintenance (Appendix C, Sept 28, 2016) refers to a DTI Project Team/field engineer and DTI Engineering Management as every stage of the process but does not state what professionals are on the Team. Landslides (or slips) are geologic hazards. An engineering geologist is essential to every phase of Slope Stability Policy and Procedure for projected-induced landslides as well as natural landslides. Revise the Slope Stability Policy and Procedure to state specifically that an engineering geologist experienced in landslide avoidance, identification, prevention, and remediation will be a core member of the team at each phase of Pipeline Siting, Design, Construction and Right of Way Maintenance. The Slope Stability Policy and Procedure focuses on a few factors, such as slope inclination, which while important, are not sufficient to characterize the many geologic factors (such as different geologic materials, geologic structures, and geologic processes) relevant to assessing natural and project-induced landslide hazards. The Slope Stability Policy and Procedure appears to be a document developed by engineers trying to assess geologic hazards with little input if any from geologists experienced in landslide avoidance, identification, prevention, and remediation. Revise the Slope Stability Policy and Procedure with the aid of an engineering geologist working together with a geotechnical engineer. A geotechnical engineer alone is not sufficient to insure that complex geologic conditions are properly identified, interpreted, and applied in the siting, design, construction and maintenance of the project and in the remediation of landslides. An engineering geologist and geotechnical engineer working together are core team members required to assure due diligence for projects like this where recognition of natural and project-induced landslide hazards and other geologic hazards are critical to a successful project.	The Slope Stability Policy and Procedure is a DETI document and not ACP-specific. It was used in the development of the BIC program. Consequently, the Policy is not revised for specific projects.

284	16	3.2.2	Slope degrees	“3.2.2 Define Slopes of Greater than 30 Degrees. The desktop study must identify the degree of slope for the entire route. There are several methods to identify and define the degree of slope, either by direct measurement from topographic maps or using various computer programs. The DTI Project Team/field engineer will select an appropriate method based on the size of the project. The DTI Project Team/field engineer may select a slope angle that is shallower than 30 degrees on a project-specific bases.” Please provide the results from this desktop analysis along with site-specific designs for each location that is greater than 40% slope on NFS Lands.	See response Comment 145.
285	21	4.1	excavation	4.1 Excavation Minimization—address the maximum amount of construction and disturbance lengths allowed during pipeline installation at any one time- Realizing that the steeper sloped areas especially with unstable soils require limits on lengths of active construction where length decreases as slope increases. Set a limit of maximum allowable disturbance per particular amount of slope.	See response to Comments 191 and 192.
286	22	4.2	SWPPP and E&S control plans	“Slope failures and slope failure-prone areas must be included in the project plans. The following items must be included on the Stormwater Pollution Prevention Plans (SWPPP) and the Erosion and Sediment (E&S) control plans: □ Slope failure areas having high risk, as determined in Section 3.4; □ Existing slope failures; and, □ Slopes steeper than 30 degrees (58 percent). The above items will be clearly identified on the plans using legend items, shading, or call outs such that the information is conveyed to the construction personnel and that awareness of the hazard is communicated.” The Forest Service has not seen this SWPPP document. Please provide this document for FS review.	See response to Comment 278.
287	22	4.40	Slopes	“The project plans and specifications must include provisions for additional subsurface drainage on slopes greater than 30 degrees (58 percent). Include callouts and details in the E&S plans for location and type of drainage.” On MNF Lands, SW07 prohibits the use of mechanized equipment on slopes greater than 40% (approx. 22 degrees) without interdisciplinary team review and line officer approval of mitigation measures to maintain stability. Therefore, on MNF Lands, project plans and specifications must include provisions for additional subsurface drainage on slopes greater than 40%.	See response to Comment 124.
288	22	4.5	slope stability	“Project-specific engineered details and specifications must be developed for those slope failure-prone areas requiring engineered preventative measures, as identified in Section 3.5. These locations will likely include areas with slopes steeper than 30 degrees (58 percent), or locations requiring pre-emptive repair of an existing slope failure in the proposed pipeline corridor.” On MNF Lands, compliance with SW07 means assurance that slope stability can be attained on slopes greater than 40%. Therefore, project-specific engineered details and specifications must be developed for those slope failure-prone areas requiring preventative measures including areas with slopes steeper than 40% (approx. 22 degrees).	See response to Comment 145.
289	23	4.5	materials management	“ Drainage Improvement: □ Provide subsurface drainage at seep locations through granular fill and outlet pipes. □ Incorporate drainage into trench breakers using granular fill. □ Intercepting groundwater seeps and diverting off ROW.” Please specify in more detail what type of granular fill will be utilized and how it will be utilized.	Granular fill consists of broken or crushed stone, gravel, reclaimed miscellaneous aggregate or a mixture thereof, generally less than 1.5 inches in diameter.
290	24	4.5	slope stability	“ Bench and Regrade with Controlled Backfill: □ A common slope failure repair approach for slopes up to 30 degrees (58 percent) includes removal of the failed soil mass and reconstruction of the slope by cutting level benches into competent soil or rock beneath the failure plane, installing subsurface drainage, and placing compacted soil or other material as backfill.” Although geotechnical compaction may be needed, intentional compaction of soils will not occur on NFS Lands	If geotechnical compaction is required, horizons below topsoil layer will be compacted. The topsoil or top layer of soil material will not be compacted
291	24	4.5	Backfill material	“ Use Alternate Backfill: □ The potential use of controlled low strength material (CLSM), such as cementitious flowable fill, as backfill within the pipeline trench could be considered as a method to reduce the pipeline trench from collecting and transporting water. The challenge is placing this material incrementally up the slope and containing it long enough for the flowable fill to harden and gain strength. Note: Dominion policy does not allow the use of CLSM containing fly ash as filler. Therefore a flowable fill using fine aggregates or sand must be used.” CLSM will not be used as backfill material on NFS Lands.	CLSM is proposed for use only at road crossings, to prevent settlement over the ditch line.
292	24	4.5	chemical stabilization of backfill	“ Chemical Stabilization of Backfill: □ Chemical modifiers, such as cement and lime, have successfully been used to dry cohesive soils that are saturated beyond the optimum moisture content, and are often used to extend the construction season. When used at higher concentrations, these modified soils can exhibit increased strength properties that can benefit slope failure stabilization projects on slopes up to 30 degrees (58 percent) or greater.” Cement will not be used on NFS Lands to dry cohesive soils that are saturated. The use of USFS-approved lime may be used to dry saturated soil.	Acknowledged. Cement will not be used to dry cohesive soils that are saturated.
293	25-26	4.6	Stormwater BMPs	Any modification to stormwater BMPs will require USFS approval on NFS Lands.	Modifications to E&S plans are approved by appropriate state permitting agency. Should any new BMPs be proposed, these will be communicated to the FS.
294	27	4.7	slope failures	“West Virginia: WVDEP requires that the SWPPP include information on slide prone areas and the methods to be implemented to both avoid slope failures and a plan of action should slope failures occur.” In WV on MNF lands, SWPP shall include information on slide-prone areas including steep slopes (slopes >40%).	The MNF was provided erosion control drawings. See response to Comment 278.
295	36	6.2.2	Silt fence	“Typical details for temporary containment measures, including silt fence, silt sock, super silt fence, and jersey barriers, are included in the SWPPP.” Silt fence shall not be used at locations of concentrated overland flow, whether the flow is natural or constructed. Compost filter socks or other controls designed to filter or chemically remove sediment from water shall be used in those locations, subject to FS approval. Silt fence may be used as perimeter control where concentrated flow does not exist, as well as where prescribed as a barrier to keep threatened, endangered, and sensitive (TES) species out of the work area, or spoil materials or sediments out of TES habitat.	"Silt sock" should read "compost filter sock".

296	38	6.2.5	slope failures	□ “ Remove soil at the top of the slope failure to unload the slope; □ Install a toe buttress using soil or rock fill, gabion baskets or similar devices; □ If possible, perform minor regrading of the slope with some level of compaction to smooth out the existing scarps and reduce the number of pockets in which water can collect; □ Direct drainage away from the slope failure through waterbars, diversion ditches, or temporary drains; □ Place plastic on the failed slope to protect the soils from rainfall and surface runoff; and □ Monitor the slope failure for signs of slope movement, especially after periods of heavy rain fall. If additional movement is detected or visible (i.e. cracks or scarps), notify Dominion Engineering for assistance.” If soil is removed from the top of the slope failure to unload the slope, this soil material will need to be stockpiled using appropriate erosion control measures to reduce erosion and sedimentation and replaced for revegetation once the slope is stabilized. Increasing compaction to the slope will increase soil bulk density, decrease porosity and water infiltration, thus decreasing revegetation potential which will increase the overall instability of the slope long-term. Plastic will not be placed on any NFS Lands. The use of hydraulic mulches, soil tackifiers, mulch, soil conditioners, etc. will be used to cover bare soil and reduce exposure to rain impact.	This comment was resolved in the context of Atlantic's Best in Class program. Atlantic agrees not to utilize plastic sheeting.
297	39	8.0	slope failures	“ If it is determined that a slope failure is caused by the actions of a third party and not related to pipeline construction or activities by DTI, the DTI Engineering Team or Operations will contact the DTI Land, Lease, and ROW group to make notification to the third party of the slope failure.” If the failure was caused by a third party contracted by DTI, ACP, or Dominion, and the third party does not have the funds to remediate, repair, and restore the slope failure, then DTI ACP Dominion is responsible for such repairs, restorations, and remediations on NFS Lands.	Acknowledged.
				Attachment D	
298	1	2.0	winter construction plans	“Within the ACP Project area and SHP Project area, the timing and extent of Winter conditions, such as snowfall and frozen soils, vary a great deal. The northern portions of the Projects, including Pennsylvania and the mountainous regions of West Virginia and Virginia, can have temperatures below freezing from early October through late April, with frozen soil conditions potentially occurring within these months (National Oceanic and Atmospheric Administration [NOAA], 2012a and 2012b).” Due to the current varying weather conditions, it is unlikely that soils will continue to freeze. If soils do not freeze during the projected winter operation season, ACP will need to utilize methods that are not conducive to erosion and compaction of soils. ACP EI’s and FS representatives will need to determine on site if soil are frozen to the point that compaction and erosion issues will be limited. ACP will need to provide the FS with construction methods that will meet MNF LRMP’s such as SW06, SW07, SW09, SW19, etc.	Atlantic will follow the normal construction procedures if conditions do not meet the winter construction plan thresholds. No revisions to the COM Plan are proposed.
299	1	2.0	winter construction plans	“In the transitional period between non-frozen and frozen soil conditions, Atlantic and DTI will implement appropriate measures as described in the Plan, Procedures, Restoration and Rehabilitation Plan, or this Winter Construction Plan based on site-specific conditions (e.g., soil stability) as determined by Atlantic’s and DTI’s Environmental Inspectors (EIs), 1 activity inspectors, and construction manager.” On NFS Lands, the FS representative will also determine if site-specific conditions are such that will not result in compaction or erosion and sedimentation.	The following will be added to Section 2.1.9.9: "In the transitional period between non-frozen and frozen soil conditions, Atlantic will implement appropriate measures as described in the Erosion Control and Sedimentation Plan, Restoration and Rehabilitation Plan and Winter Construction Plan, based on site-specific conditions (e.g., soil stability) as determined by Atlantic’s Environmental Inspectors (EIs), craft inspectors, construction site supervisor, and the AO or his/her designee."
300	2	4.0	winter construction plans	Snow Removal- on graveled access roads on National Forest System Lands shall have a minimum of snow left to protect the road base and with required drainage-if such sections and conditions require blading down to road base then operator will be required to repair and replace this material per NFS standards. A road use permit may be required. SNOW REMOVAL. Snow removal shall be conducted in a manner that protects roads, ensures safe and efficient transportation of materials, and prevents erosion damage to roads, streams, and adjacent lands. The holder shall: 1. Remove snow from the entire width of the road surface, including turnouts. 2. Remove snow slides, earth slides, fallen timber, and boulders that obstruct the road surface. 3. Remove snow, ice, and debris from ditches and culverts so that the drainage system will function efficiently at all times. 4. Deposit all debris, except snow and ice, removed from the road surface and ditches at locations approved by the responsible official and away from stream channels. 5. Blades used to remove snow shall be equipped with skid shoes to prevent loss of surfacing and damage to the road. A minimum of 2 (two) inches of snow must be left to protect the road. 6. Restore any damage resulting from snow removal in a timely manner. 7. Ensure that snow plowing is conducted in accordance with the traffic control plan required under clause II.D. The holder shall not: 8. Undercut constructed slopes or remove gravel or other surfacing material from the road surface. 9. Leave snow berms on the road surface. Berms on the shoulder of the road shall be removed or drainage holes shall be opened and maintained. Drainage holes shall be spaced as necessary to obtain satisfactory surface drainage without discharge on erodible fills. 10. Use equipment with cleats or other tracks to plow snow without prior written approval of the responsible official. 11. Use any agents, chemical or physical, to aid in the removal of snow	These requirements will be added to Section 2.1.9.9.
301	2	4.0	winter construction plans	“Snow will be removed from both the working and spoil sides of the construction right-of-way prior to topsoil segregation and grading to prevent mixing of snow with excavated spoil. Snow will be removed and stockpiled along the edges of the construction right-of-way or in approved ATWS areas, or blown off the right-of-way as described above. Gaps will be left in stockpiled snow piles based on an assessment of drainage patterns to allow water to drain off of the right-of-way during the Spring thaw or other warm periods. Gaps also will be left in the stockpiled snow at drainage crossings.” ACP will use temporary erosion controls, such as filter socks, in between stockpiled topsoil and spoil material and stockpiled snow to prevent erosion or mixing on NFS Lands.	Added to Section 2.1.9.9 "ACP will use temporary erosion controls, such as compost filter socks, in between stockpiled topsoil and spoil material and stockpiled snow to prevent erosion or mixing on NFS lands."

302	3	5.0	Topsoil segregation	"In agricultural lands, topsoil will be removed and segregated from the trenchline and the spoil side of the construction right-of-way with the exception of areas directly beneath snow stockpiles. In open uplands, including pasture and hay fields, topsoil will be removed and segregated from the trenchline only with the exception of limited areas where grading is necessary to create a level work surface within the construction right-of-way. Topsoil typically will be removed using a step blade attached to a bulldozer. Alternatively, Atlantic and DTI may remove topsoil in frozen conditions by ripping with a grader or heavy disc or by utilizing a pavement excavator to pulverize the topsoil and allow for conventional removal." ACP needs to provide details on how topsoil will be segregated in forested areas and on steep slopes on NFS Lands. At a minimum, the FS will require segregation over the trench area for the top 6 inches of material, or all actual topsoil as identified by the FS, whichever is deeper, throughout all areas of National Forest land.	No change will be made to the Winter Construction Plan. Topsoil issues will be addressed elsewhere. See Comment 18.
303	4	5.0	winter construction plans	"Soils excavated while frozen may slump if they thaw. To prevent the mixing of topsoil and subsoil if slumping occurs, Atlantic and DTI will cover the stockpiled topsoil in mulch, which will create a barrier between topsoil and subsoil." ACP will need to have topsoil separate from subsoil during stockpiling on NFS Lands.	No change will be made to the Winter Construction Plan. Topsoil issues will be addressed elsewhere. See Comment 18.
304	4	5.0	winter construction plans	"In upland areas, the trench will be backfilled with subsoil as described below. Depending on the extent of frost penetration in topsoil piles, however, the topsoil may be stockpiled over the Winter for replacement during the following Spring when it can be worked and contoured." Stockpiled topsoil will need to have temporary erosion control measures to limit erosion. This will require mulch and filter socks providing a perimeter barrier that will limit sedimentation and erosion.	Protection of topsoil piles is covered in the Erosion Control and Sedimentation Plan. Atlantic has avoided the repitition of these requirements in the Winter Construction Plan, to reduce redundancy and unnecessary length.
305	4	5.0	ACP inspectors	"Stockpiled subsoil will develop a layer of frost penetration, the thickness of which will be dependent on water content, temperature, wind, and snow cover conditions. Prior to backfilling, frozen material will be skimmed off the top of the subsoil pile to provide access to underlying, unfrozen subsoil for backfilling. The unfrozen subsoil material will be backfilled over the pipeline first, followed by the frozen subsoil material. If frozen subsoil exhibits lumps or sharp edges that could damage the coating on the pipeline, Atlantic's or DTI's construction manager will determine appropriate backfill measures to be implemented. Such measures may include the use of mechanical shakers or grinders to break up frozen subsoils prior to backfilling, or in extreme cases, the use of sand padding around the pipe. If sand padding is used, it will be obtained from an upland commercial source and used in upland areas only." Frozen subsoil will not be placed back into the trench until it has thawed and then dried to the allowable moisture content explained below: Topsoil and spoil material shall be replaced only when moisture levels in those reserved materials are at appropriate levels. Appropriate levels shall be determined using Time Domain Reflectometry (TDR) measurements taken at 5 or more locations in each pile between 1 and 2 ft below the pile surface. This requirement applies to all spoil piles on National Forest land, except as noted otherwise below. In jurisdictional wetland areas, ACP is not required to conduct soil moisture testing. The flat topography of the wetlands being crossed by the project is not likely to lead to slope failures. In areas that (1) are not jurisdictional wetlands, and (2) were identified by the Order 1 soil survey as having wet or poorly drained soil, testing is required regardless of the timing of excavation and backfill, and regardless of any precipitation that may or may not have occurred between initial excavation and completion of backfilling. In all other areas, testing is not required if (1) excavation and backfilling occur on the same day, or (2) no precipitation occurs between initial excavation and completion of backfilling. All individual moisture values from each pile (not the average of all measurements) must be less than 25 percent volumetric water content for replacement of material into the trench (spoil material) or onto the surface of the trench (topsoil). Twenty-five percent volumetric water content is approximately field capacity (field capacity is the approximate soil moisture resulting from 2 to 3 days of drainage following saturation). ACP shall employ qualified and trained inspectors who will be responsible for taking TDR measurements and evaluating whether the results meet allowable soil moisture requirements for backfilling. The number of inspectors will be adjusted (increased or decreased) based on the schedule of activities and the needs of the project. The TDR unit (brand and model) must be agreed to as suitable by the Forest Service. ACP's inspector shall keep records of the measured moisture levels for each topsoil and spoil pile at or just before the time of replacement into or onto the trench. The location (i.e., GPS locations along with the nearest milepost) of each topsoil or spoil pile shall be noted along with those moisture levels. TDR measurements shall be taken during the construction phase of the Project during trench backfilling (both subsoil and topsoil) on National Forest lands. Measurement results shall be provided to the Forest Service weekly, except for weeks when no backfilling occurs on National Forest land. The Forest Service will be notified that no backfilling occurred via ACP's weekly status report, which is filed on the FERC docket. If moisture levels are found to be unsuitable for replacement (i.e., they exceed allowable moisture requirements), topsoil or spoil material may be mechanically mixed, or Forest Service-approved materials (e.g. lime, etc.) may be physically mixed in, to allow evaporation to achieve allowable moisture levels.	Adequate compaction cannot be achieved if the moisture content is not optimal; therefore, Atlantic will use a compaction penetrometer and provide weekly reports to the NFS of the compaction. The following will be added to Section 2.1.9.9 of the COM Plan. "If moisture levels are found to be unsuitable for replacement, topsoil or spoil material may be mechanically mixed, or FS-approved materials may be physically mixed in to allow evaporation to achieve allowable moisture levels. If compaction comparison measurements of adjacent soil and restored soil reveal discrepancies Atlantic will either decompact or rework the soils to establish appropriate compaction. Compaction measurement results will be provided to the Forest Service staff on a weekly basis."

306	5	5.0	Final Cleanup	"Final cleanup activities will be performed once the ground is fully thawed in the Spring and the topsoil (and subsoil, if applicable) stockpiled over Winter has dried sufficiently to allow it to be worked without causing excessive compaction and/or rutting. The schedule for final clean-up will be determined based on ground conditions, but Atlantic and DTI anticipate that activities will resume in the Spring or as soon as extended periods above freezing occur" Describe techniques for ensuring moisture levels in backfilled material do not present an elevated risk of slippage. Topsoil and spoil material shall be replaced only when moisture levels in those reserved materials are at appropriate levels. Appropriate levels shall be determined using Time Domain Reflectometry (TDR) measurements taken at 5 or more locations in each pile between 1 and 2 ft below the pile surface. This requirement applies to all spoil piles on National Forest land, except as noted otherwise below. In jurisdictional wetland areas, ACP is not required to conduct soil moisture testing. The flat topography of the wetlands being crossed by the project is not likely to lead to slope failures. In areas that (1) are not jurisdictional wetlands, and (2) were identified by the Order 1 soil survey as having wet or poorly drained soil, testing is required regardless of the timing of excavation and backfill, and regardless of any precipitation that may or may not have occurred between initial excavation and completion of backfilling. In all other areas, testing is not required if (1) excavation and backfilling occur on the same day, or (2) no precipitation occurs between initial excavation and completion of backfilling. All individual moisture values from each pile (not the average of all measurements) must be less than 25 percent volumetric water content for replacement of material into the trench (spoil material) or onto the surface of the trench (topsoil). Twenty-five percent volumetric water content is approximately field capacity (field capacity is the approximate soil moisture resulting from 2 to 3 days of drainage following saturation). ACP shall employ qualified and trained inspectors who will be responsible for taking TDR measurements and evaluating whether the results meet allowable soil moisture requirements for backfilling. The number of inspectors will be adjusted (increased or decreased) based on the schedule of activities and the needs of the project. The TDR unit (brand and model) must be agreed to as suitable by the Forest Service. ACP's inspector shall keep records of the measured moisture levels for each topsoil and spoil pile at or just before the time of replacement into or onto the trench. The location (i.e., GPS locations along with the nearest milepost) of each topsoil or spoil pile shall be noted along with those moisture levels. TDR measurements shall be taken during the construction phase of the Project during trench backfilling (both subsoil and topsoil) on National Forest lands. Measurement results shall be provided to the Forest Service weekly, except for weeks when no backfilling occurs on National Forest land. The Forest Service will be notified that no backfilling occurred via ACP's weekly status report, which is filed on the FERC docket. If moisture levels are found to be unsuitable for replacement (i.e., they exceed allowable moisture requirements), topsoil or spoil material may be mechanically mixed, or Forest Service-approved materials (e.g. lime, etc.) may be physically mixed in, to allow evaporation to achieve allowable moisture levels.	See response to Comment 305.
307	5	6.0	winter construction plans	"Construction in Winter months may minimize impacts in wetlands because construction will occur outside of the wet (Spring, Summer, and Fall) seasons in areas where sustained frozen conditions occur along the pipeline routes. In Winter conditions, frozen soils may provide stability for construction equipment working on the right-of-way and help prevent sloughing of the pipe trench which could occur in the Spring, Summer, and Fall seasons due to saturated conditions." Due to the current varying weather conditions, it is unlikely that soils will continue to freeze. If soils do not freeze during the projected winter operation season, ACP will need to utilize methods that are not conducive to erosion and compaction of soils. ACP EI's and FS representatives will need to determine on site if soil are frozen to the point that compaction and erosion issues will be limited. ACP will need to provide the FS with construction methods that will meet MNF LRMP's such as SW06, SW07, SW09, SW19, SW37, etc.	See Comment 298. No changes to the COM Plan are proposed.
308	5	6.0	topsoil removal	"In frozen soil conditions in wetlands, Atlantic and DTI will remove and segregate topsoil from the area disturbed by trenching, but a thin layer of topsoil may be left over the trenchline during the process of removing the topsoil to prevent the introduction of subsoil into the segregated topsoil." ACP will not leave a thin layer of topsoil over the trench line during the removal of topsoil. If very limited amounts of subsoil are introduced unintentionally into topsoil piles that is more acceptable than mixing topsoil amounts with the majority of subsoil amounts when stockpiled.	The following will be added to Section 2.1.9.9 "Although excavation during frozen soil conditions is not anticipated during construction on NFS lands, if it becomes necessary to excavate across wetlands in such conditions, based on comments from the FS, Atlantic will not leave a thin layer of topsoil over the trench line during the removal of topsoil, as will be done on non-NFS lands."
309	5 and 6	6.0, 7.0 Wetlands, Waterbodies	weather impacts on construction	"Construction in Winter months may minimize impacts in wetlands because construction will occur outside of the wet (Spring, Summer, and Fall) seasons in areas where sustained frozen conditions occur along the pipeline routes." "Construction in the Winter may minimize impacts on waterbodies because construction will occur outside of the wet seasons in the areas crossed. This may avoid or minimize the potential for increased turbidity within waterbodies as well as impacts on fisheries." Spring, Summer and Fall are not necessarily the wet times of year on FS lands in Virginia. Precipitation is normally well distributed. Many years Winter can be very wet due to rain, snow melt, rain on snow events and lower evapotranspiration levels. Freezing and thawing, especially on southerly aspects, can create high soil compaction hazards and rutting. Frozen soil conditions are variable on FS land in Virginia in Winter, depending on weather, aspects and elevations. In reality there does not appear to be "wet seasons" in many areas of FS land in Virginia, so these statements may not apply there and maybe other areas along the proposed route.	Acknowledged.
310	6	8.0	winter construction plans	"In frozen conditions, temporary slope breakers will not be installed during initial clearing and grading activities because soils will be frozen and not subject to erosion." Due to the current varying weather conditions, it is unlikely that soils will continue to freeze. If soils do not freeze during the projected winter operation season, ACP will need to utilize methods that are not conducive to erosion and compaction of soils. ACP EI's and FS representatives will need to determine on site if soil are frozen to the point that compaction and erosion issues will be limited. If soils are or are not frozen, temporary erosion control devices will still need to be in place to reduce the risk of erosion and sedimentation if potential thawing were to occur. ACP will need to provide the FS with construction methods that will meet MNF LRMP's such as SW06, SW07, SW09, SW19, etc.	See response to Comment 298. No changes to the COM Plan are proposed.

311	8	8.0	winter construction plans	"Where required on the construction right-of-way, mulch typically will be applied at a rate of 2 tons/acre. When mulching before seeding, however, mulch will be applied at a rate of 3 tons/acre on slopes within 100 feet of waterbodies and wetlands. If conditions preclude crimping, Atlantic or DTI may elect to spray water to freeze the mulch in place, or apply a biodegradable tackifier." Atlantic will not spray water on NFS Lands to freeze mulch in place. On NFS Lands, the application of a hydraulic mulch or tackifier will be used.	The following will be added to Section 2.1.9.9 "Similarly, in the unlikely event that during restoration mulch cannot be crimped due to frozen soil, hydraulic mulch or tackifier will be employed to stabilize mulch; water will not be used.".
312	9	13.0	More information needed	"The Contractors will install mats along the travel lane where soils are excessively wet and rutting is occurring to prevent mixing of topsoil and subsoil." ACP will have to provide description on how they are going to comply with MNF LRMP SW06 and SW07.	See response to Comment 298. No changes to the COM Plan are proposed.
313	9	13.0	winter construction plans	• " The Contractors may use frost driving measures, such as snow packing, to increase the load bearing capacity of the ground where necessary to remove equipment off the right-of-way (but not as a condition to allow construction to continue). The frost driving measures will be implemented in the early morning or evening to take advantage of colder temperatures. • If native materials become unsuitable for frost driving, e.g., mud resulting from snow melt, timber equipment mats will be used to create a suitable driving surface. • If the EI and construction manager determine that muddy conditions are severe and rutting occurs, work will be suspended until conditions improve." Atlantic will have to comply with MNF LRMP SW06 and SW07. Atlantic will not be able to conduct construction operations when soil conditions are saturated and create erosion and compaction issues along the ROW and disturbance areas on NFS Lands.	Acknowledged.
314	9		winter construction plans	Dominion should note that when construction is halted due to weather or dangerous operating conditions during the winter, seeding at normal or increased rates alone will not meet Forest Service requirements for stabilization. Therefore: -To the maximum extent practicable, Dominion shall complete construction in areas identified as susceptible to slope instability or erosion (e.g., steep slopes) at a time in the construction cycle that maximizes the available growing season length for revegetation, while complying with other timing commitments related to TES species. Dominion shall address this aspect of construction sequencing in the COM plan for National Forest land. - Soil conditioner or hydraulic mulch applications shall be permitted year-round for pipeline restoration. West Virginia Department of Environmental Protection vegetative ground cover requirements (70 percent cover) shall be met in spring even if hydroseeding and soil conditioner or hydraulic mulch applications are made during late fall or winter. If ground cover requirements are not met because the seed sowed during the dormant season became nonviable, additional seeding and soil amendments shall be applied. Reseeding and soil amendment application shall be required at the start of the spring. The timing for reseeding and other amendments shall be in accordance with manufacturer's recommendations for both the seed mix and the application for soil conditioners or hydraulic mulches. Dominion will coordinate with the Forest Service by March 15th to determine if reseeding or other amendments are necessary in areas that were seeded during late fall or winter and are on the schedule for early inspection in the spring. Temporary erosion control for work stoppages during the winter shall be required where soil disturbance has occurred but pipeline construction or reclamation has not been completed. Temporary erosion control shall require treatment of soil materials and the soil surface to reduce the potential for soil movement, as well as installation of erosion control treatments to further ensure sediment transport is controlled. Rough surfacing shall be used to increase the potential for water infiltration and reduce the potential for sheet erosion. Soil protection shall be provided to rough surfaced areas to enhance temporary erosion control during the dormant season. Protection will be in the form of soil conditioners or hydraulic mulches (e.g., polyacrylamides, polysaccharides, etc.) or weed-free mulch or similar soil cover determined to be suitable by the Forest Service. Weed-free mulch or similar soil cover may be used as a substitute for, or augmentation to, soil conditioners or hydraulic mulches. These forms of soil protection may be applied with or without seed application. The soil conditioners or hydraulic mulches that are used shall be identified by Dominion and be suitable for the soil chemical conditions. The Forest Service must approve the selected conditioner(s) prior to application. Different soil conditioners or hydraulic mulches may be needed at different locations along the pipeline route because soil chemistry varies along the route. The expected life of the soil conditioner or hydraulic mulch shall be a consideration in the selection; if the expected effective life of the soil conditioner or hydraulic mulch is less than the time until work resumes, additional applications of the soil conditioner or hydraulic mulch shall be required. For mulches, at a minimum, the type of mulch and application method shall be capable of preventing erosion by raindrop impact and	These measures will be added to Section 11.3.1.10 of the Restoration Plan, with some modification. The second bullet will not be added. It is unlikely that any fall dormant seeding would attain 70% cover at the BEGINNING of the following growing season; consequently, this bullet point would appear to require re-seeding over the previous season's restoration effort, and damaging restoration progress.
Attachment F					
315	n/a	General	Access road maps	Engineering will need to review site specific plans and project specifications for any road work, including maintenance, reconstruction, and construction. Road reconstruction or construction should follow FP03 standards (FHWA). Culverts should be designed for 50 year storm event (at a minimum) Please include all planned culvert crossings. Attachment F does not appear to address all needed crossings.	Acknowledged. Maps will be updated to include culverts.
316	n/a	Access Road Imp. Maps	Access road maps	Some ownership labels are erroneously placed.	These errors will be corrected.
317	n/a	Access Road Imp. Maps	Access road maps	In general the maps do not appear to be based on true parcel boundary locations, appears to be a GIS product. Ownership boundaries are not accurate. Survey grade data should be used to delineate parcel boundaries, features, and areas to be potentially encumbered (permanently and temporary) on USFS lands.	Maps and alignment sheets will show property boundaries based on most recent civil surveys.

318	n/a	Access Road Imp. Maps Part 01 (FR 1012)	Access road maps	Widening should be clearly marked out prior to a full field visit. Overall width is very narrow, this is a cause for concern over access with any truck/trailer combination. Road profile: The grade from station 2 + 50 to 16 + 00 is moderately steep, the modification to drainage dips on this portion of road could cause drainage problems, and this could be a problem for heavy truck/trailer combination. At 00 + 00 (beginning of road) off of WV 92, suggestion would be to increase sight distance along with increasing the width of FR 1012 at the entrance. At 34 + 00, do they mean south when referring to “widen area 25 feet north by 100 feet to allow passing of equipment on roadway”. North at this area is a steep downslope embankment while south looks to be the better option for widening. From 73 + 00 to 93 + 27 (E333Y intersection), ACP should look at this more closely, a full reconstruction of the road would be suggested. The roadway looks to be as little as 8 feet wide in some sections along with a steep embankment downhill on the western side and steep embankment uphill on the eastern side. At 93 + 27 (end of road) does ACP plan to build a turnaround or will they be build a short access to the pipeline and use that?	Revised AR information includeing information of improvements has been provided to the FS.
319	n/a	Access Road Imp. Maps Part 01 (FR 1026)	Access road maps	Widening should be clearly marked out prior to a full field visit. - Distance to property line should be clearly labelled where the property line is close to the roadway work. - ACP should also keep in mind that this is a slip prone area and has a high erosion potential. - At 00+00, if widened, the pipe under the roadway would need to be replaced. - At 32+25, remove the mounds on the north side of the road and ensure that the drainage is still effective. How will ACP manage the leadoff ditch damage? ACP needs to specify the taper. - At 35+00, ACP commented on extending the culvert, how did they plan on doing this? They would need to specify if welding onto the existing pipe or a solid joint. They also need to specify which side the culvert may be extended on. - At 42+00, ACP may need to consider cutting on the east side of the road along with maintaining the drainage on the west side. The length of 100 feet of widening seems to be short for long trailers. - At 48+50, ACP has not commented on this curve but it would be suggested that they take a look at this. - At 55+50, the embankment with the curve located here is not shown on the map and this could be a future issue with long trailers. - At 56+00, widening of the roadway would be suggested. - At 61+75, would suggest adding fill on the outlet side of the culvert along with new pipe, any additional fill would have trouble due to the current aluminum pipe. Extension of the current pipe could cause future hazards so doing so would be strongly discouraged. - At 68+00, ACP’s comment states 5 feet in length, this seems to be wrong, maybe they meant 50 feet but 5 feet looks to be entirely too short. There is a lot of water in the ditch on the left side of the roadway, a possible culvert may need to be installed to lower the risk of saturation at the toe of the proposed cut. - At 75+50, a new longer pipe would be suggested, the cover over the culvert is thin. The current culvert is already crushed. The fill and stone on each side before the culvert may need to be longer as in 80 feet instead of 60 feet along with the taper needing to be clarified. - At 102+00, it would be recommended to extend the pipe at the outlet, the culvert cover at the inlet is less than 1 foot. - At 105+25, ACP needs to address the culvert and the culvert length. - At 107+00 to 108+00, this curve will be a possible trouble spot for longer trailers, map barely shows a curve. - At 154+50, a new one piece culvert would be suggested at this location. - At 185+75 to 187+00, curve widening is suggested between the culverts located between these locations. - At 193+75, a full culvert replacement with curve widening 10-12 feet wide by 100 feet in length is suggested. - At 202+50, concerns with the culvert cover and ditch line at this location. - At 245+00, new culverts may need to be installed at the Y intersection where ACP leaves the road, will a turnaround be needed using FR 1026?	Revised AR information includeing information of improvements has been provided to the FS.
320	n/a	Access Road Improvement Maps Part 02 (FR 55)	Access road maps	Gate may cause issues for longer trailers, may need to move the gate up station to prevent this from becoming an issue. At 7+50, curve may need widening along with culvert extension or replacement. At 18+50, culvert is short therefore needs replacement or extension along with possible curve widening. At 33+50, curve may need widening along with culvert extension or replacement which directly affects the curve at 34+50. At 37+50, curve may need widening along with culvert extension or replacement. At 38+50, curve widening on the right/northeast side. At 66+25, may need longer section than 5 feet by 100 feet buildup in order for facility equipment to make the curve, would also prefer a longer pipe if widening the roadway at the culverts. At 67+25, may need to cut fill slope back for the swing of facility equipment. At 95+00, may be tight for some trailers, depends on length. At 100+50, may be right for some trailers, depends on length. At 111+00 to 145+41, multiple drainage dips, would be a problem if a lowboy trailer is using the road, may want to address this issue. At 119+50, curve widening needed, cutting the bank on the left side of the road. At 121+50, curve widening needed, fill on the right side of the road. At 125+50, curve widening needed, cutting the bank on the left side of the road. At 131+00, curve widening needed, fill on the right side of the road. At 145+41, will they be needing a turnaround to accommodate turning of traffic?	Revised AR information includeing information of improvements has been provided to the FS.

321	n/a	Access Road Improvement General Comments	Access road maps	All comments made for the access roads (FR 1012, FR 1026, FR 55) were made assuming a lowboy trailer being the largest piece of equipment using these roads, some comments may be changed if ACP specifies what vehicles will be using these roads. ACP should address what vehicles will be using the roadways. What type (triaxle, truck and trailer) and length would be requested. The FS would like to see all culverts fully replaced instead of extended. A full replacement would eliminate a possible weakness at the joint when extending the culverts. The FS does not recommend installing culverts below 18" in diameter due to excessive leaf litter and debris causing them to plug. (ACP recommends multiple 12" culverts which would be discouraged) The frequency of traffic would also be requested and could change some comments. Will there be any overweight loads, what would be the typical load going on the roads? Cover consideration over the culverts would/could be an issue. The culverts would need to be assessed prior to using the roads anyhow (in case of damage due to haul or damage preexisting). FR 1026 and FR 1012 are already steep on the inside of the curves and would pose a problem for truck/trailer combinations. How does ACP plan to deal with this issue and maintain sufficient drainage in the process? Why is the pipeline crossing FR 55 three times within 0.1 miles? The FS would like to see them stay north of the road and cross the road once or stay south of the road and cross it once. This is in reference to the crossings around the location of station 137+00 to 145+41 on FR 55. The GIS file shows the pipeline crossing FR 55 at the gate while the COM main body plan says it will not cross at this location and the shapefile agrees with the pipeline not crossing. We would like the GIS, shapefile, and COM plan to all be in agreeance.	Atlantic will add the following to Section 2.1.1.4: "Use of Forest Road 1026 is subject to several conditions as detailed in the Biological Evaluation (incorporated by reference into the COM Plan). A biological monitor will be on site during road improvement activities to ensure Allegheny woodrat habitat at FR 1026 is avoided and undisturbed. In road segments adjacent to Allegheny woodrat habitat, road usage will be minimized to avoid dawn and dusk high woodrat activity periods and minimize potential injury or mortality from vehicle collisions. Similarly, in road segments adjacent to potential eastern spotted skunk rocky outcrop habitat, road usage will be minimized to avoid dawn and dusk high skunk activity periods and minimize potential injury or mortality from vehicle collisions."
322	n/a	Access Road Improvemt Maps	Access road maps	In Rev 11 b on the east slope of Tower Hill and southwest of Browns Pond, the centerline has been rerouted several thousand feet to the northeast. Has this section been surveyed for TESLR species?	Yes, this area has been surveyed for TESLR species.
323	n/a	Attachment F	missing information	Document says they will be provided later. We can't comment on information that is not provided.	Acknowledged.
324	n/a	Attachment F	Access roads	Access Road improvement plan and alignment sheets for the access roads need to be provided. Specifications for alignment sheets of access roads are the same as alignment sheets for pipeline.	Revised AR information including information of improvements was provided to FS.
325	n/a	Attachemtn F	Access road maps	Attachment F contains no access road improvement maps, so we cannot comment on them at this time. However, four files, named "Access_Road_Maps_2017_01_12_Part01", "Access_Road_Maps_2017_01_12_Part02", "Access_Road_Maps_2017_01_12_Part03", and "Access_Road_Maps_2017_01_12_Part04" were provided to the USFS, but they do not provide the detail needed for impact analyses. We have requested shapefiles of the impact footprint and further details about the proposed access road improvements in order to make comments and help make determinations of effects in wildlife habitat areas.	Revised AR information including information of improvements was provided to FS.
326	n/a	Road Improvement Maps	Access road maps	First 9 maps are hard to read with fall colors, yellow road lines, orange boundary lines. Could use better colors. Label roads with FS road numbers. Make Forest Service ownership lines more visible. Group maps agency by Mon National Forest, GW/Jeff National Forest, and other agencies. As previously discussed, ACP needs permission of private landowner for access across some private lands even though the FS has access.	Acknowledged.
327	n/a	Road Improvement Maps	Access road maps	Show Forest Service Tract numbers to help locate maps or tie to mile markers.	Tract numbers will be added to maps.
328	Map 45 of 47	Attachment F, access road improvement maps part 4	Access road maps	This map shows access road 07-001.AR.AR9 crossing a delineated stream at least 4 times and actually sharing the same space as the stream with no identified culverts or crossings. This must be an error. Please correct.	This will be corrected if it is in fact an error.
Attachment G					
329	12	6.2	Soil Survey	"Throughout the Project, the predominant soil textures observed in the field were silt loams. The ridgelines and steep backslopes were mostly comprised of soil material with this silt-rich texture. The silt particle size (2-50 µm) is the most susceptible to erosion due to its light weight and minimal cohesiveness. Erosion and sediment control measures will be critical during and post construction with soil material that is highly susceptible to erosion, especially on steep slopes." ACP needs to incorporate the information into the BIC and site-specific design controls for erosion especially on steep slopes.	The BIC and site-specific designs considered and addressed soils that are highly susceptible to erosion.
330	13	6.3	Soil Survey	"Based on an estimated bulk density (not measured during survey) of 0.2 g cm-3 for the O-horizons, 1.2 g cm-3 for the A-horizons, and 1.4 g cm-3 for subsoil horizons it would be estimated that the O-horizons, A horizons and Subsoil horizons would contain about 64.8 mg C cm-3, 73.2 mg C cm-3, and 12.6 mg C cm-3 respectively. Due to their interaction with the environment, surface horizons provide numerous ecosystem services as a result of the higher organic carbon contents and biotic interactions including facilitating higher infiltration rates, carbon sequestration, nutrient cycling, providing a seed bank, etc. Carbon contents are dynamic because they are a balance between vegetative inputs and decomposition rates. Complete loss of these layers during construction would require decades of high inputs to recover. Conservation of these layers during construction and replacement following construction will ensure a faster recovery and provide ecosystem services that would assist in the restoration of these habitats." ACP will be required to calculate the estimated carbon lost to construction of the ROW using the carbon data from the Order 1 Soil Survey. The estimated carbon that is lost due to construction will need to be mitigated.	Compaction measurements will be used in lieu of moisture content measurements. See response to Comment 305.
Attachment H					
331	n/a	Attachment H	Karst Plan	The FS commented about this issue previously. While we understand that the karst report was conducted by a geologist from a strictly geological/structural point of view without regard to the microclimate of the feature or potential karst inhabitants, biological considerations need to be included when addressing the unanticipated scenarios detailed in the document. Openings, voids, channels, "features", and "structures" all have the potential to contain cave inhabitants, which depend on the consistent microclimate of the feature. If this microclimate is altered because of interception by construction or blasting, it could affect the biotic environment, which is why a qualified biologist needs to be consulted upon the discovery and on remediation.	See response to Comment 134.
332	11 to 13	Attachment H Karst Terrain Construction and Mitigation Plan	Karst Plan	Pre construction and Construction Phase- needs to address and include dye tracing as an accepted and reasonable process to determine connectivity, flow rate and delineate the areas of effect and potentially identify changes and effects from activities and or possibly construction. It needs to be incorporated with ERI.	Atlantic has performed karst surveys and studies. Where recommend, by karst experts, dye trace studies have been performed. ERI surveys are used for construciton planning purposes only.
333	11	Attachment H Karst Terrain Construction and Mitigation Plan	Karst Plan	Electrical Resistivity Investigation (ERI)- Include use of these protocols/process in the Pre-Construction Section page 13. At the beginning (page 1), the document provides a description of the contents outlined and includes ERI during the construction phase. Essentially, this is too late in the process and ERI needs to be used during the pre-construction phase. This will allow proper time to assess, evaluate and develop a proper case specific plan should a cave or sinkhole be discovered.	ERI requires trees cleared and is used to identify voids up to 10' below the surface. The intended use of ERI is to mitigate, rather than avoid, karst-related impacts. Pre-Construction studies and surveys of karst features were conducted per inustry receognized standards. ERI is not used for preconstruction surveys; it is used for construction planning only.

334	13	Attachment H Karst Terrain Construction and Mitigation Plan	Karst Plan	Describe process and mitigation for minimizing effects from using a boring (drilling) machine that is within planned ROW disturbance and any extra or changed mitigations for such boring outside the ROW disturbance area.	All boring/drilling activities will be contained with the authorized work limits.
335	13	Attachment H	Karst Plan	" a. If an identified feature with potential impact to the subterranean environment falls within the area designated for earth disturbing activities and cannot be avoided, the feature will be documented by field location and photographs, and then assessed for pre-construction remediation by Atlantic/DTI staff with input and guidance to be provided by the KS." Comment: A biologist should also be consulted. Structural integrity and hydrology are not the only concerns that need to be addressed upon the discovery of an opening or feature. The opening should be investigated by a qualified biologist to determine if bats or other species are present in the structure, if the feature is suitable for bats (large enough, suitable microclimate), and how remediation will affect the microclimate upon which bats and other species depend. A biologist should investigate the entire biotic environment and be consulted on remediation in addition to the geologist/KS.	See response to Comment 134.
336	13	Attachment H Karst Terrain Construction and Mitigation Plan	Karst Plan	Provide greater detail and description to define the 'greater than 6 inch hole' during the blasting phase. Is this a diameter measurement? Is there connectivity or inferred connectivity? A one inch hole parallel along a plane can connect and transfer enormous amounts of flow.	See response to Comment 134.
337	14	Attachment H	Karst Plan	"If changes in the features are observed, Atlantic/DTI staff will report the condition to the KS who will provide consultation on potential impacts to the karst environment and possible remedial actions." and "If any feature is intercepted during work activities including borings, blasting, and excavation or trenching, the onsite geologist will conduct an initial assessment of the feature to determine if further inspection (Level 2) by the KS will be required." Comment: Same comment as above - Because structural integrity of the feature is not the only concern, a biologist should also be consulted. The opening should be investigated by a qualified biologist to determine if bats or other species are present in the structure, if the feature is suitable for bats (large enough, suitable microclimate), and how remediation will affect the microclimate upon which bats and other species depend. A biologist should investigate the entire biotic environment and be consulted on remediation in addition to the geologist/KS.	See response to Comment 134.
338	14, 15	Attachment H	Karst Plan	Also, footnotes 2 and 3 refer only to caves or cave entrances. Throughout the document, there are references to "voids", "openings", and "features", any of which have the potential to house bats and other species, and therefore should be included in the coordination addressed in the footnotes.	Acknowledged.
339	15	Attachment H	Karst Plan	" a. The KS will examine the feature and determine if it has potential impact to the subterranean environment based on potential hydraulic connectivity with the karst aquifer via the epikarst stratum." and "c. If the feature is determined to have potential impact to the subterranean environment, the KS will consult with Atlantic/DTI staff regarding appropriate remedial actions. c. If the feature is determined to have potential impact to the subterranean environment, the KS will consult with Atlantic/DTI staff regarding appropriate remedial actions." and "e. If any changes are observed, the KS will provide consultation on potential impact to the karst environment and remedial actions, if necessary." Comment: Impact to the subterranean environment cannot be based solely on hydrology. The microclimate, including temperature, above the aquifer is vital to endangered, threatened, and regionally sensitive bat species and other species. A biologist should be consulted upon discovery of a feature to determine if bats or other species are present in the structure, if the feature is suitable for bats (large enough, suitable microclimate), and how remediation will affect the microclimate upon which bats and other species depend. A biologist should investigate the entire biotic environment and be consulted on remediation in addition to the geologist/KS.	See response to Comment 134.
340	15	Attachment H	Karst Plan	Footnote 3 "If an opening to a cave forms during construction activities, should be immediate coordination with the Virginia DCRNHP Karst Program (or) West Virginia Department of Conservation for investigation. " Comment: Footnote 3 needs to include the USFWS and USFS and read the same as footnote 2 – "If an opening to a cave forms during construction activities, there should be immediate coordination with the US Fish and Wildlife Service, US Forest Service (if within Forest Service ownership land) Virginia DCR-NHP Karst Program (or) West Virginia Department of Conservation, for investigation.".	Atlantic agrees with the comment. Section 6.8 of the COM Plan will be revised to include this notification/coordination step. Attachment H applies to the entire project and will not be revised.
341	16	Attachment H Karst Terrain Construction and Mitigation Plan	Karst Plan	Reference is made to Columbia's HCP BMPs for ACP—Checking whether if this is a misprint or intended use. "Measures to Avoid Impact to the Karst Aquifer and Environment These measures shall apply to any karst feature which allows the unfiltered and unimpeded flow of surface drainage into the subsurface environment, including (but not limited to): open throat sinkholes, caves which Receive surface drainage, sinking streams, and losing stream segments. These avoidance measures were derived from the NiSource Habitat Conservation Plan, Madison Cave Isopod Avoidance and Minimization Measures, and the Columbia Pipeline Group HCP and non-HCP species Best Management Practices"	The referenced language is correct. It references the recognized document for AMAs as developed in conjunction with the US Fish and Wildlife Service.
342	18	Attachment H	Karst Plan	5 b. and 5 c. "The void will be inspected by the KS and the most appropriate remedial method will be determined on a case-by-case basis." Comment: A biologist should also be consulted upon discovery of a void to determine if bats or other species are present in the structure, if the feature is suitable for bats (large enough, suitable microclimate), and how remediation will affect the microclimate upon which bats and other species depend. A biologist should investigate the entire biotic environment and be consulted on remediation in addition to the geologist/KS.	See response to Comment 134.
343	18	Attachment H	Karst Plan	6 b. "If the rock removal intercepts an open void, channel, or cave, the work in that area will be stopped until a remedial assessment can be carried out by a qualified geologist or engineer with experience in karst terrain." Comment: Structure is not the only concern when intercepting a void, channel, and cave. The biotic environment is of concern because of possible alterations, upon exposure, to the microclimate upon which cave inhabitants depend. A biologist should be consulted upon discovery of a feature to determine if bats or other species are present in the structure, if the feature is suitable for bats (large enough, suitable microclimate), and how remediation will affect the microclimate upon which bats and other species depend. A biologist should investigate the entire biotic environment and be consulted on remediation in addition to the geologist/KS.	See response to Comment 134.

344	n/a	Attachment I	Typical Erosion and Sediment Control Details	Erosion control blankets will not be used on NFS Lands. Alternative erosion control materials may be used on steep slopes such as hydraulic mulches, soil conditioner, soil tackifiers, etc. The USFS is open to alternative suggestions from ACP.	Atlantic will use Flexterra and/or Earthguard, or equivalent products, as alternatives to more standard erosion control blankets. See Comments 18 and 234.
345	n/a	Attachment I	Typical Erosion and Sediment Control Details	Foam shall not be used for trench plugs anywhere along the pipeline on National Forest lands. Trench plug spacing in the FERC Upland Erosion Control Revegetation and Maintenance Plan (May 2013 version) is acceptable to the Forest Service and shall be employed on National Forest lands by Dominion. Closer trench plug spacing will be allowed where Dominion determines a need due to slope steepness. Bags of concrete mix may be used for trench plugs no more frequently than every other trench plug; sand bags or earth-filled sacks shall be used for all other trench plugs and sand bags or earth-filled sacks may be used for consecutive trench plugs (i.e., more frequently than every other trench plug) at Dominion's discretion. Any off-site earthen material must be shown through testing or inspection to be free of chemical contaminants, non-native invasive species propagules, and other undesirable contaminants, and is subject to Forest Service approval prior to use.	Atlantic continues to propose use of foam trench breakers. Atlantic is awaiting the analysis that the FS committed to perform on the proposed use of foam trench breakers. Foam trench breakers are a key component of Atlantic's BIC program which was developed through adaptive management and construction experience.
346	n/a	Attachment I	Typical Erosion and Sediment Control Details	Bleeder drains will be used on slopes greater than 30% on NFS Lands with an outlet at every other trench plug. Bleeder drain outlets (daylighting) anticipated to be installed on slopes greater than 30 percent shall be spaced no farther apart than every other trench plug. Closer bleeder drain outlet spacing will be allowed where Dominion determines a need due to slope steepness, bleeder drain discharge volumes, or other factors. Bleeder drains may need to be installed on slopes less than 30% if subsurface flow and/or seeps are encountered during excavation of the trench. The Dominion EI and the Forest Service representative will determine when this is applicable in the field. Riprap at the outlet of bleeder drains shall be composed of limestone or other suitable stone material to achieve the purpose of energy dissipation. Water quality testing at selected bleeder drain outlets will be required post-pipeline construction. The Forest Service is still working to identify the locations where testing will be conducted. The testing locations will be based on site sensitivities (i.e., Threatened, Endangered, and Sensitive (TES) species habitat, brook trout spawning, presence of nearby private or public wells, etc.). The Forest Service will provide Dominion with the locations and chemical parameters at a later date.	Atlantic does not anticipate enough flow from the bleeder drains to reliably conduct water quality monitoring. In addition, Atlantic does not anticipate chemical consituents to be associated with ephemeral discharge at the bleeder drains, therefore Atlantic does not believe that water quality monitoring is necessary at these locations.
347	n/a	Attachment I	Typical Erosion and Sediment Control Details	Silt fence shall not be used at locations of concentrated overland flow, whether the flow is natural or constructed. Compost filter socks or other controls designed to filter or chemically remove sediment from water shall be used in those locations, subject to FS approval. Silt fence may be used as perimeter control where concentrated flow does not exist, as well as where prescribed as a barrier to keep threatened, endangered, and sensitive (TES) species out of the work area, or spoil materials or sediments out of TES habitat. Where temporary slope breakers are deemed necessary during construction, as determined by consultation between ACP's environmental inspector and the FS representative, install berms or other appropriate diversion structures on the ROW to intercept and divert water from the ROW. Install 12-inch diameter or larger compost filter socks at the outlet of the berms to control sediment transport. In areas where excessive run-on (i.e., onto the ROW or access roads) is expected or occurs, diversion channels or berms may be installed on the upslope side of the ROW. Run-on diversions or berms shall disperse the water into a well vegetated area, such that it does not result in concentrated discharge or rill erosion at or downslope of the outlet. One or more 12-inch or larger diameter compost filter socks shall be installed at each outlet to aid in reducing energy and removing sediment suspended in the discharged water.	Section 9 will be revised to reflect the comments.
348	n/a	Attachment I	Typical Erosion and Sediment Control Details	USFS requested more site specific sediment and erosion control plan measures. We were told a best in class program was established. Where is that information? This appendix is still just the basics with limited details. Supplement with BIC program information.	See respone to Comment 278.
Attachment J					

349	n/a	Attachment J	non-native invasive plants	The herbicides proposed in Attachment J are listed below along with the effects on the soil resource: Herbicide effects on the soil resource are dependent on the chemical components and their mobility in the soil. Some herbicides are not mobile and bind readily with the soil—these are less likely to result in groundwater contamination unless soil erosion potential is high (i.e., steep slopes), whereas other herbicides are more mobile and depending on the half-life of the particular herbicide, the more mobile herbicides are more likely to result in groundwater contamination. All of this however, is based on the soil type. If all label application guidelines are followed, the risks of having herbicides leave the site prior to reaching its half-life and degrading is low, unless erosion occurs and affected soil moves off site or into water bodies. In that situation, the highest risk for unplanned herbicide transport and contamination would be on slopes over 30 percent. Slopes >30 percent correspond to the most sensitive soils within the proposed ACP ROW Project, as they are the slopes at greatest risk for both natural and management-induced erosion. Even if herbicides are bound to soil particles, in a steep slope area where erosion potential is high, the soil and herbicide could be carried to an adjacent waterway. Where erosion issues are a concern, herbicides would not be broadcast sprayed over bare soil. Hand and spot (wick) application would have to be used in these areas, followed by re-vegetation (e.g., seeding) after the herbicide efficacy has degraded. Herbicide treatment should not occur until environmental and climate conditions are such that chemical mobility would be low and the probability of target treatment success would be high. ACP proposes the following herbicides: Sethoxydim (SERA, 2001c) Sethoxydim has not been studied extensively on soil invertebrates. • Assays of soil microorganisms noted transient shifts in species composition at soil concentration levels far exceeding concentrations expected from USDA Forest Service application. No adverse effects to soil microorganisms are expected with the rates proposed in this project. • Sethoxydim is degraded by soil microbes, with an estimated half-life of 1 to 60 days. Adsorption of sethoxydim varies with organic material content. • Modeling results indicate sethoxydim runoff is highest in clay and loam soils with peaks after the first rainfall. Triclopyr (SERA, 2003b) The five commercial formulations of triclopyr contain one of two forms of triclopyr, BEE (butoxyethyl ester) or TEA (triethylamine). Triclopyr BEE is much more toxic to aquatic organisms than triclopyr TEA. A breakdown product, TCP (3,5,6-trichloro-2-pyridinol), is more toxic than either form of triclopyr. Site-specific cumulative effects analysis buffer determinations need to consider the form of triclopyr used and the proximity of any aquatic triclopyr applications, as well as toxicity to aquatic organisms. • Triclopyr has not been studied on soil invertebrates. • Soil fungi growth was inhibited at concentrations 2 to 5 times higher than concentrations expected from USDA Forest Service application rates.	Acknowledged.
				• Triclopyr has an average half-life in soil of 46 days while TCP has an average half-life in soil of 70 days. Warmer temperatures decrease the degradation time of triclopyr. • Soil adsorption is increased as organic material increases and decreased as pH increases. Triclopyr is weakly adsorbed to soil, though adsorption varies with organic matter and clay content. Both light and microbes degrade triclopyr (SERA, 2003b). Glyphosate (SERA, 2003a) Numerous soil bacteria, fungi, invertebrates, and other microorganisms have been studied for their effects to glyphosate application. • There is nothing in the current literature to suggest glyphosate would adversely affect soil organisms. • Glyphosate is readily metabolized by soil microorganisms and some species can use glyphosate as a sole source of carbon. • It is degraded by microbial action in both soil and water. • Glyphosate degrades in soil, with an estimated half-life of 30 days. • Glyphosate is highly soluble, but adsorbs rapidly and tightly to soil. • Glyphosate has low leaching potential because it binds so tightly to soil. • Modeling results indicate glyphosate runoff is highest in loam soils with peaks after the first rainfall. Pendimethalin (epa.gov) • There is nothing in the literature to suggest Pendimethalin would adversely affect soil organisms. • Pendimethalin dissipates in the environment by binding to soil, microbially-mediated metabolism and volatilization. • It is essentially immobile in soil. • Pendimethalin may contaminate surface water from spray drift associated with aerial and ground spray application, or in runoff from rainfall events and through irrigation waters (chemigation). • Its high affinity to bind to soil and sediment particles should limit concentrations of pendimethalin in surface waters unless in areas that are have risks of erosion such as steep slopes. • Pendimethalin has been detected in ground water (at very low levels), the potential for ground water contamination from pendimethalin residues is low. • Overall, pendimethalin does not represent a high risk to aquatic animals and plants, including estuarine organisms. • The use of pendimethalin may adversely affect endangered species of terrestrial and semi-aquatic plants, aquatic plants and invertebrates including mollusks, fish, and birds (specifically grazers). • The risk to nontarget terrestrial and semi-aquatic plants is expected to be moderate. • To lessen the risks posed by pendimethalin, follow handling, mixing, and application instructions. • To reduce risks to nontarget plants, add spray drift best management practices. 2, 4-D Amine (epa.gov) Esters of 2,4-D are rapidly hydrolyzed in alkaline aquatic environments, soil/water slurries, and moist soils. The 2,4-D amine salts have been shown to dissociate rapidly in water. However, 2,4-D esters may persist under sterile acidic aquatic conditions and on dry soil. These bridging data indicate under most environmental conditions 2,4-D esters and 2,4-D amines will degrade rapidly to form 2,4-D acid. • The dissipation is dependent on oxidative microbial-mediated mineralization, photodegradation in water, and leaching.	Acknowledged.

				• Degrades rapidly in soils (half life = 6.2 days), degrades rapidly in aerobic aquatic environments (half life = 15 days), and is relatively persistent in anaerobic aquatic environments (half life ranges from 41 to 333 days). • 2,4-D esters volatilize readily, particularly in conditions of high temperatures and low humidity. • 2,4-D has a low binding affinity in mineral soils and sediment. • 2,4-D has been detected in groundwater at approximately 15 ppb. This is below the DWLOCs determined to be protective in the human health risk assessment and below the maximum contaminant level (MCL) set at 70 ppb by the EPA Office of Water. • 2,4-D is considered to be moderately to practically non-toxic to birds on an acute basis. • 2,4-D is classified as slightly toxic to small mammals on an acute oral basis. • A honey bee acute toxicity study indicated that 2,4-D is practically non-toxic to the honey bee. 2,4-D is toxic to terrestrial plants; it is more toxic to dicots than to monocots. • 2,4-D acid and amine salts have been found to be practically non-toxic to freshwater or marine fish. • The 2,4-D esters have been found to be highly toxic to fish. • Acute toxicity studies on 2,4-D acid and amine salts show these compounds to be slightly toxic to practically nontoxic to aquatic invertebrates. • The 2,4-D esters have been found to be very highly toxic to slightly toxic to freshwater and marine invertebrates. • The 2,4-D esters may be chronically toxic to freshwater and marine invertebrates. • 2,4-D is toxic to aquatic plants; it is more toxic to vascular plants than to non-vascular plants. • Most ecological risk quotient (RQ) values exceed the LOC, with the following exceptions: chronic risk to fish from use of 2,4-D BEE for aquatic weed control, risk to endangered aquatic plants from use of 2,4-D on rice and for aquatic weed control, chronic risk to mammals from use of 2,4-D liquid spray, acute risk to non-endangered and endangered plants from use of 2,4-D liquid spray, and acute risk to non-endangered and endangered plants from use of 2,4-D granules. • There is a potential for risk to endangered species	Acknowledged.
				Attachment K	
350	n/a	Attachment K	Spill Report	The Spill Prevention Countermeasures and Control Plan (SPCC) should be included with this form	The SPCC Plan is included as part of the COM Plan.
				Attachment L	
351	Attachment L	4.00E-05	GWNF Unanticipated Discoveries	Brian Webb is no longer patrol Captain on the G.W. & Jeff. Nat. Forests. The Patrol Captain is Katie Ballew	The plan will be revised to reflect the comment.
				Attachment M	
352	n/a	Attachment M Add new section- Paleontological Resource Protections	MNFF Unanticipated Discoveries Plan	Add new Section- Unanticipated Paleontological Discovery Plan and provide protocol for encountering potential vertebrate fossils Add to Attachment L as well for the GWNF	The Unanticipated Discovery Plan addresses these concerns.
				Attachment O	
353	n/a	Attachment O	ANST HDD Drawings	2nd page, first line reads: “Blue Ridge Parkway.” Note that Blue Ridge Parkway is not USFS lands.	Acknowledged.
354	n/a	Attachment O	ANST HDD Drawings	All pages in this Attachment, and ALL Attachments to the COM Plan, need to have page numbers.	Acknowledged.
355	n/a	Attachment O	ANST HDD Drawings	3rd page, oversized sheet, Drawing Label: “BR Parkway 1” □ Property ownerships are not shown clearly and need to be emphasized, especially the federal ownerships. □ “Appalachian Trail” needs to be relabeled as “Appalachian National Scenic Trail”	Acknowledged.
356	n/a	Attachment O	ANST HDD Drawings	5th and 9th pages are very similar, both labelled “Stress Analysis, “worst-case)”. □ Please label these sheets and explain their difference to an interested non-geotechnical-drilling-engineer. □ Explain what “with BC” and “no BC” mean.	The drawings will be updated as requested.
				Attachment P	
357	multiple	Attachment P	Contigency Plan ANST and BRP	Throughout this Attachment, beginning on 3rd page, in List of Acronyms and Abbreviations, change “AT” to “ANST”. Also: □ Page 1, first paragraph in section 2.0, two references, □ Page 2, 2nd paragraph in section 6.9, two references, □ Page 3, top line,	The requested change will be made.
358	1	Attachment P	Contigency Plan ANST and BRP	First paragraph, change “AGL Resources” to match the successor company, as shown in section 1.1 on page 1 of the main COM Plan document.	The requested change will be made.
359	2	Attachment P	Contigency Plan ANST and BRP	Section 6.0, first sentence. Change “results” to “result” to match singular/plural.	The requested change will be made.
360	2	Attachment P	Contigency Plan ANST and BRP	Section 6.0, 3rd paragraph. Refers to NPS lands. This COM Plan is specific to USFS lands, per the statement on page 3 in section 1.1 of the main document. Should this be “USFS” instead of “NPS”?	No change made with respect to NPS, but it will be noted that there will be no ground disturbance on NPS land.
361	3	Attachment P	Contigency Plan ANST and BRP	Section 6.0, first partial paragraph on this page – states no ground disturbance or tree clearing within 350’ of the ANST. This conflicts with the dimensions and distances listed in Figure 1 on page 4 of this Attachment (400’). This section needs to be reworded to give the correct distances and to add a clear and direct statement as to whether or not any ground disturbance or tree clearing will occur on any USFS lands in this area; knowing that one goal of the HDD and DPI is to completely avoid all ground disturbance or tree clearing on USFS lands.	Clarified that the exit point for the direct pipe installation lies off NFS lands approximately 400' from the ANST, and that no ground disturbance would occur on NFS lands.
362	4	Attachment P	Contigency Plan ANST and BRP	Figure 1. Thank you for delineating and labelling the Appalachian National Scenic Trail correctly on this page. Several other comments on this page: □ In the legend, change “National Forest Service” to “USFS Lands”. Previously requested in Draft-1. □ Revise this figure to clearly show the Trenchless Exit and the limits of surface disturbance as ending on private land, NOT partially on private and partially on USFS lands. □ Revise this figure to eliminate the “ghost” irregular wedge of apparent private land as shown east of the USFS land (dark green) and west of the NPS land (purple). This does not exist, and showing it on this figure is confusing and erroneous. The USFS lands abuts and joins the NPS lands. Previously requested in Draft-1.	The figures will be revised to reflect the comment.
363	5	Attachment P	Contigency Plan ANST and BRP	Show USFS ownership and property lines much more clearly. Also, change the label “Appalachian Trail” to “Appalachian Nationa l Scenic Trail”.	The drawing will be changed.
				Attachment Q	

364	n/a	Attachment Q	Timber Cruise Plan	Because certain MNF Land and Resource Management Plan standards and guidelines will not be followed, resulting in the destruction of primary bat roosting trees, additional mitigation measures for bats need to be incorporated into various documents. These mitigation measures will include snag creation and artificial roosting structures at a 1:1 ratio. To do this, it must be known how many shagbark hickory trees over 5 DBH and snags of particular specifications are taken, which requires timber cruisers to keep track of them. Attachment Q MNF Timber Cruising Specifications will need to be updated to reflect these details once bat surveys are complete.	Updated MNF cruise specifications will be included when received from the MNF.

State/Commonwealth Agencies

West Virginia Agencies

West Virginia Division of Culture and History

WEST VIRGINIA
Division of Culture and History

The Culture Center
1900 Kanawha Blvd., E.
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Randall Reid-Smith, Commissioner
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EEO/AA Employer

June 15, 2017

Mr. Robert Bisha
Project Director Atlantic Coast Pipeline
Dominion Resources Services, Inc.
5000 Dominion Blvd.
Glen Allen, VA 23060

RE: Atlantic Coast Pipeline; FERC Docket # PF15-6-000
FR#: 15-171-MULTI-27

Dear Mr. Bisha:

We have reviewed the draft report titled *Phase I Archaeological Survey of the Atlantic Coast Pipeline Project, West Virginia Components Season 5*, which was submitted for the above referenced project to determine potential effects to cultural resources. As required by Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

Archaeological Resources:
The Season 5 draft report covers archaeological survey conducted within a 300-foot corridor along 3.4 miles of pipeline reroute, the footprint for two contractor yards and a water containment site, and a 50-foot corridor along two access roads. A total of 1.7 miles of the pipeline reroute will be surveyed once access is granted and the results will be presented in a separate report. A separate report will also be submitted for the corridor located in the Monongahela National Forest. Fieldwork conducted during Season 5 resulted in the identification of five archaeological sites, 46PH787, 46PH788, 46PH789, 46PH805, and 46PH806.

Sites 46PH787, 46PH788, 46PH789, and 46PH806 are described as diffuse, low density prehistoric lithic scatters. While sites 46PH787 and 46PH789 are of unknown age, 46PH788 and 46PH806 each yielded a single diagnostic artifact suggesting occupation during the Middle Archaic and Late Archaic periods, respectively. 46PH806 also produced a negligible historic isolate, one retouched flake tool, two cores and a single piece of fire-cracked rock. Site 46PH805 is described as a low density historic-era artifact scatter comprised of three pearlware sherds recovered from two shovel probes. Artifacts from these sites were recovered from plowzone contexts, suggesting that stratified deposits are not present. No cultural features were identified and, except for one fire-cracked rock fragment recovered from 46PH806, no evidence suggesting the presence of cultural features was observed. Due to the diffuse nature of the deposits as well as the lack of cultural features and stratified deposits, we concur that archaeological sites

46PH787, 46PH788, 46PH789, 46PH805, and 46PH806 have little research potential and are not eligible for inclusion in the National Register of Historic Places.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Lora A Lamarre-DeMott, Senior Archaeologist, at (304) 558-0240.*

Sincerely,

Susan M Pierce
Deputy State Historic Preservation Officer

SMP/LLD

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 18, 2017

Ms. Susan M. Pierce
Deputy State Historic Preservation Officer
West Virginia Division of Culture and History
1900 Kanawha Boulevard, East
Charleston, West Virginia 25305-0300

Subject: Section 106 Review –Cemetery Protective Treatment Plan
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
FR#: 14-928-Multi

Dear Ms. Pierce:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed cemetery protective treatment plan on investigations conducted for the proposed Atlantic Coast Pipeline (ACP). The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the attached cemetery protective treatment plan, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed reports, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Cemetery Protective Treatment Plan**

Dominion Resources Services, Inc.
5000 Dominion Boulevard,
Glen Allen, VA 23060

July 27, 2017

Ms. Susan M. Pierce
Deputy State Historic Preservation Officer
West Virginia Division of Culture and History
1900 Kanawha Boulevard, East
Charleston, West Virginia 25305-0300

Subject: Section 106 Review – Phase I Historic Architectural Survey Report Addendum 5
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
FR#: 14-928-Multi

Dear Ms. Pierce:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed revised addendum architectural survey report on investigations conducted for the proposed Atlantic Coast Pipeline (ACP). Revisions are based on the April 26, 2017 letter. The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the attached revised addendum architectural survey report, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed report, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dom.com, or by letter at:

Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion)
Enclosure: **Phase I Historic Architectural Survey Report Revised Addendum 5**

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 27, 2017

Ms. Susan M. Pierce
Deputy State Historic Preservation Officer
West Virginia Division of Culture and History
1900 Kanawha Boulevard, East
Charleston, West Virginia 25305-0300

Subject: Section 106 Review – Phase I Historic Architectural Survey Assessment of Effects Report, Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline
FR#: 14-928-Multi

Dear Ms. Pierce:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed assessment of effects architecture report, which reports on investigations conducted for the proposed Atlantic Coast Pipeline (Project). The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the enclosed document, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed reports, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Phase I Historic Architecture Survey Assessment of Effects Report**

West Virginia Division of Natural Resources

From: Bailey, Richard S [mailto:Richard.S.Bailey@wv.gov]
Sent: Monday, May 22, 2017 2:34 PM
To: Sara Throndson; Tracy Brunner; Brown, Clifford L
Cc: Richard B Gangle (Services - 6); Spencer Trichell (Services - 6); Stout, Elizabeth
Subject: [External] RE: Atlantic Coast Pipeline - Rookeries

Hi Sara,

I responded to Tracy with confirmation of receipt on April 13th when I received her email. The plan as written looks OK. I would like to request written notification of when construction will commence/be ongoing within the buffer. WVDNR staff may monitor the rookery during this time to assess possible response to construction noise etc.

Thanks,

Richard Bailey
State Ornithologist
WVDNR Wildlife Resources Section
PO Box 67, Ward Road, Elkins WV, 26241
304-637-0245 x2018
www.WVDNR.gov

From: Sara Throndson [mailto:Sara.Throndson@erm.com]
Sent: Monday, May 22, 2017 1:53 PM
To: Tracy Brunner; Brown, Clifford L; Bailey, Richard S
Cc: Richard B Gangle (Services - 6); Spencer Trichell (Services - 6); Stout, Elizabeth
Subject: RE: Atlantic Coast Pipeline - Rookeries

Cliff and Rich, I am following up on the below email sent to you on April 13 from Tracy Brunner in my office. Atlantic is planning to implement the conservation measures as outlined in the memo. Please confirm that you received the memo and let us know if you have questions.

Thank you, Sara

Sara Throndson
Office 612-347-7113 I Cell 612-716-7812

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

June 27, 2017

BY OVERNIGHT (OR EXPRESS) MAIL

Cliff Brown
West Virginia Division of Natural Resources
P.O. Box 67 – Ward Road
Elkins, WV 26241

Re: Supply Header Project and Atlantic Coast Pipeline Project
Submittal of Protected Snake Conservation Plan

Dear Mr. Brown,

For your files, attached is the Protected Snake Conservation Plan developed in cooperation with the Virginia Department of Game and Inland Fisheries to address potential impacts on listed/protected snakes. This plan will be implemented in all areas with potential for listed/protected snakes as described in the attached Plan. Potential timber rattlesnake (*Crotalus horridus*) habitat is crossed by the proposed Supply Header Project (SHP) within Wetzel County, West Virginia, and by the proposed Atlantic Coast Pipeline Project (ACP) in Pocahontas County, West Virginia. In West Virginia the project specific conservation measures outlined in the attached plan will be implemented in Wetzel and Pocahontas Counties from April 1 through October 31.

Project and Company Background

Atlantic is a company formed by four major U.S. energy companies – Dominion Energy, Duke Energy, Piedmont Natural Gas, and Southern Company Gas. The company was created to develop, own, and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. For more information about the ACP, visit the company's website at www.atlanticcoastpipeline.com. Atlantic has contracted with Dominion Energy Transmission, Inc., a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic.

In addition, Dominion Energy is proposing to construct and operate approximately 37.5 miles of pipeline loop and modify existing compression facilities in Pennsylvania and West Virginia. This project, referred to as SHP, will enable Dominion Energy to provide firm transportation service of up to 1.5 million dekatherms per day to various customers, including Atlantic Coast Pipeline, LLC's ACP. For more information about the SHP, visit the company's website at www.dominionenergy.com/supplyheader. Atlantic will be a Foundation Shipper in the SHP, and will utilize the SHP capacity to allow its shippers access to natural gas supplies from various DTI receipt points for further delivery to points along the ACP.

Atlantic and Dominion Energy look forward to continuing to coordinate with you on these projects. Please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding these projects. Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Supply Header Project and Atlantic Coast Pipeline

cc:

Attachments: Protected Snake Conservation Plan

Virginia Agencies

Virginia Department of Conservation and Recreation

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 11, 2017

Jason Bulluck
Virginia Department of Conservation and Recreation
600 East Main Street, 24th Floor
Richmond, Virginia 23219

S. Rene' Hypes
Virginia Department of Conservation and Recreation
600 East Main Street, 24th Floor
Richmond, Virginia 23219

RE: Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project; Emporia Powerline Bog and Handsom-Gum Powerline Conservation Sites

Dear Ms. Hypes:

Atlantic Coast Pipeline, LLC has developed the attached mitigation (Attachment A) plan to provide an increased level of protection and offset potential adverse effects to wetland hydrology that may be caused by the Atlantic Coast Pipeline (ACP), in the vicinity of identified element occurrences at two Virginia Department of Conservation and Recreation (DCR) Conservation Sites.

The attached *Mitigation Measures for the Atlantic Coast Pipeline, Emporia Powerline Bog and Handsom-Gum Powerline Conservation Sites* has been developed in response to comments and concerns raised by the DCR throughout consultations specific to ACP.

We look forward to continuing to work with you on the ACP. Please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, if there are questions regarding this report. Please direct written responses to:

Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Attachment A

Mitigation Measures for the Atlantic Coast Pipeline,
Emporia Powerline Bog and Handsom-Gum Powerline Conservation Sites

Per our previous correspondence with your office, and information provided in the Federal Energy Regulatory Commission (FERC) proceeding, Atlantic Coast Pipeline, LLC (Atlantic) has further investigated avoidance, minimization and mitigation measures at two Virginia Department of Conservation and Recreation (DCR) Conservation Sites – Emporia Powerline Bog and the Handsom-Gum Powerline, located in Greensville and Southampton Counties, Virginia respectively – through extensive planning and routing studies, field investigations, responses to comments from agencies and stakeholders, and in-depth environmental evaluations and findings. Atlantic understands these Conservation Sites contain natural heritage resources, which will benefit from careful planning, construction, restoration, and operation of the Atlantic Coast Pipeline (ACP). Further, Atlantic's detailed study of these Conservation Sites revealed that they are unique in that the habitat in these areas persists and thrives due to the existence and maintenance of utility corridors. Therefore, with the mitigation measures Atlantic has identified, construction and operation of the ACP may actually enhance the current habitat characteristics, and provide availability for habitat expansion.

Per FERC requirements and Atlantic's additional commitments, the ACP construction, restoration, and operations will be conducted consistent with the FERC's *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures). The Procedures establish baseline minimization and mitigation measures for pipeline construction and restoration in and around wetlands and waterbodies. Specific requirements for wetland crossings outlined in the Procedures include, but are not limited to:

- Construction and restoration oversight by an Environmental Inspector.
- Compliance with all federal, state, and local permit terms and conditions.
- Limiting certain construction activities within proximity of wetland boundaries.
- Limiting the amount of time topsoil is segregated and the trench is open.
- Cutting vegetation above ground level and leaving existing root systems.
- Segregation of top one foot of topsoil (in non-saturated wetland areas) and restoring segregated topsoil to its original location.
- Restoring pre-construction contours to maintain the original wetland hydrology.

Additional site-specific strategies have been identified by Atlantic through correspondences and studies in coordination with the VDCR, which would be utilized during and after construction of the ACP to further protect, facilitate restoration, and potentially benefit these natural heritage resources. A summary of site-specific construction, restoration, and operational strategies that would be employed are as follows:

Emporia Powerline Bog Conservation Site (Emporia Bog site)

The Emporia Bog site lies to the south of the proposed ACP work area. Based on U.S. Geologic Survey (USGS) topographic maps, the general terrain slopes from the northeast to the southwest in this area. Shallow groundwater movement in the area is expected to follow the same gradient, and the proposed ACP right-of-way (ROW) will be up-gradient from the Emporia Bog site. Atlantic has conducted shallow soil sampling and characterization, and recommends the following actions to augment the Procedures, to preserve the shallow hydrologic regime in the area, thus providing an increased level of protection to the Emporia Bog site from adverse impacts, in relation to the construction and operation of the ACP.

- A detailed civil survey of the proposed ACP ROW will be performed in this section of the construction ROW prior to construction, to establish pre-construction contours and topographic features. Post construction, these surveyed data points will be referenced to support restoration of the surface elevations and contours as near to pre-construction conditions that influence surface sheet-flow of water as possible.

- Based on the general soil characteristics identified in Atlantic's soil assessment of the ROW at Emporia Bog site, a restrictive clay layer is present in multiple samples around 1.5 to 2.0 feet below ground surface, and extending for a thickness of 1.0 to 5.0 feet. Above this layer, a less restrictive loam and sandy-loam layer was also present. Based on these observations, the pipeline itself will generally be placed within restrictive clay and sandy-clay soils. During restoration, re-establishment of this restrictive layer, which limits downward movement of shallow groundwater, will assist with preserving current shallow groundwater hydrology. If necessary, a layer of low permeability clay may be utilized to augment the native backfill at the appropriate elevations within the pipe trench.

- Construction will include soil segregation during construction and restoration in this area of the ACP ROW as per the Procedures, for better re-establishment of these soil layers during backfill activity. This will maintain down-gradient water availability of the Emporia Bog site. This will also maintain the topsoil seed bank, stock roots, and rhizomes that exist in the upper layer, and will promote revegetation of the existing plant communities. Care will be taken to maintain separation of stockpiles, and during backfill activity to appropriately place materials back into the trench, limit mixing, and restore the upper topsoil.

- Impermeable trench plugs will be installed along the ACP pipeline trench during construction to limit the lateral movement of shallow groundwater, to the east and west along the pipe trench. By limiting this lateral movement, shallow groundwater which naturally moves towards the Emporia Bog site along the existing northeast to southwest gradient may be preserved. Given that the subsoil conditions around the pipe installation depth are primarily restrictive clays and sandy-clays, and that these excavated native materials will be utilized as backfill, it is anticipated that lateral hydrologic movement along the pipe trench will be minimal and impermeable trench plugs will further negate that movement.

- Thorough documentation of the plant communities in the Emporia Bog site work area will continue. Different plant communities influence shallow groundwater in different ways. By documenting pre-construction vegetative compositions, a baseline for restoration success can be established. It may become beneficial during restoration monitoring to restore the area with vegetation with similar water uptakes, to preserve current conditions.

Handsom-Gum Powerline Conservation Site (Handsom-Gum site)

All of the strategies for construction and restoration in the Emporia Bog site are relevant to, and will be applied at the Handsom-Gum site. Careful documentation of the plant community, including rare species, will be conducted prior to construction and during restoration monitoring. If it is determined that restoration success will benefit from the salvage of existing plants from the Handsom-Gum site, individuals of critical species may be removed and temporarily relocated adjacent to the construction area or transported from the work area to an alternate location for the duration of construction, then re-introduced during restoration.

- Based on the general soil characteristics identified in Atlantic's soil assessment at Handsom-Gum site, a restrictive clay layer is present in multiple samples around 1.0 to 2.0 feet below ground surface, and extending for a thickness of 2.0 to more than 5.0 feet. This layer contains clay, sandy-clay, and sandy-clay-loam soils. Above this layer, a less restrictive loam and sandy-loam layer was present. Based on these observations the pipeline itself will generally be placed within restrictive clay and sandy-clay materials. During restoration, re-establishment of this restrictive layer of clay, which limits downward movement of shallow groundwater, will assist with preserving current shallow groundwater conditions.

- Construction will include soil segregation during construction in this area of the ACP ROW as per the Procedures, for better re-establishment of these layers which affect the flow of shallow groundwater, and thus affect the hydrology of the Handsom-Gum site. This will also maintain the topsoil seed bank, stock roots, and rhizomes that exist in this layer and will promote revegetation of the existing plant communities. Care will be taken to maintain separation of stockpiles, and during backfill activity to appropriately place materials back into the trench, limit mixing, and restore the upper topsoil.

Atlantic appreciates the importance of preserving the character and natural heritage resources of these two DCR Conservation Sites, and is committed to construction, restoration, and operational practices for the ACP that avoid, minimize, and mitigate potential adverse impacts. Through careful planning, construction, restoration, and operational commitments by Atlantic, the ACP ROW will promote open-canopy conditions that are preferential to plant species identified in the Emporia Bog and Handsom-Gum sites, that are adapted to the higher light conditions, and when soils and hydrology create optimal conditions. By implementing the measures provided herein, Atlantic believes the ACP will be protective of the existing resources and has the potential to benefit these natural heritage resources by enhancing and expanding preferential habitat of sensitive species that exist in these areas.

Virginia Department of Game and Inland Fisheries

Tracy Brunner

From: Ewing, Amy (DGIF) <Amy.Ewing@dgif.virginia.gov>
Sent: Monday, May 01, 2017 10:48 AM
To: Tracy Brunner
Cc: Sara Throndson; Fernald, Ray (DGIF); Boettcher, Ruth (DGIF); Harding, Sergio (DGIF); Cooper, Jeff (DGIF)
Subject: RE: Atlantic Coast Pipeline - Rookeries (ESSLog# 34825)

Hi Tracy,
We have reviewed the information provided regarding proposed protective measures around identified rookeries along the most recent ACP route in Southampton County and the City of Suffolk. We are agreeable to the proposed conservation measures for ROOK-ACT-02 located in the City of Suffolk, near milepost 64.6 of the AP-3 lateral.

Regarding the other three rookeries, identified either by VA's Natural Heritage Program or the Center for Conservation Biology and which are located in Southampton County, we recommend that these rookery locations be visited/surveyed/flown to determine whether these rookeries are active (currently 2017 nesting season), and which species they include. We assume these are all great blue heron rookeries, but confirmation would be good to have. If the rookeries are determined active, we recommend that they be mapped and then re-evaluated for protective measures. If they continue to be active as construction approaches, we may recommend additional protective measures be adhered to during pipeline construction, assuming the location of the active rookery falls within 0.5 mile of construction activities.

Thanks, Amy

Amy M. Ewing

Environmental Services Biologist/FWIS Program Manager
Chair, Team WILD (Work, Innovate, Lead and Develop)
VA Department of Game and Inland Fisheries
7870 Villa Park Dr., Suite 400, PO Box 90778, Henrico, VA 23228
804-367-2211 ☯ *www.dgif.virginia.gov*

"That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics" **Aldo Leopold, 1948**

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 28, 2017

BY EMAIL

Amy Ewing
VA Department of Game and Inland Fisheries
7870 Villa Park Dr., Suite 400
PO Box 90778
Henrico, VA 23228

Re: Dominion Energy, Inc., Atlantic Coast Pipeline (ACP)
Virginia Rookeries, Follow-Up

Dear Ms. Ewing,

A letter regarding rookeries identified in Virginia was sent to your office on April 12, 2017. Dominion Energy received a response on May 1, 2017. To summarize, in Virginia, the buffers of four rookeries were identified as overlapping with construction workspace. Additional surveys were conducted at three of the four rookeries, as requested by your office in the May 1, 2017 response. Attached is a memo containing updated proposed conservation measures for the four rookeries of concern.

Project and Company Background

Atlantic Coast Pipeline, LLC (Atlantic) is a company formed by four major U.S. energy companies – Dominion Energy, Inc., Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Gas Company. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The underground pipeline project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina.

Atlantic has contracted with Dominion Energy Transmission, Inc. (DETI), a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic. The ACP will be regulated by the Federal Energy Regulatory Commission (FERC) under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

Atlantic requests your concurrence on the proposed conservation measures for rookeries in Virginia. Please contact Mr. Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dom.com, if there are questions regarding this information. Please direct written responses to:

Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

FOR RICHARD GANGLE

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: Sumalee Hoskin, U.S. Fish and Wildlife Service Virginia Field Office
Sarah Nystrom, U.S. Fish and Wildlife Service Virginia Field Office

Attachments:

ACP Virginia Rookery Review Memo

Colonial Wading Bird Rookeries
Atlantic Coast Pipeline Project, Virginia
July 28, 2017

Rookery ID	County, State	Project Segment, near MP	Survey Notes [a]	Proposed Conservation Measures
ROOK-ACT-02	City of Suffolk, VA	AP-3, 64.6	Several nests and whitewash observed, but not active at time of visit. Updated location point collected.	Portion of HDD workspace and access road on east side of Nansemond River falls within recommended buffer. Due to distance of rookery to workspace edge (0.45 mile), request relief from extent of time of year restriction. Drilling is necessary to avoid impacts on other biological resources potentially found in the Nansemond River, and the workspace is unable to be reduced in size or shifted outside of the buffer due to the drill design and requirements. Virginia Department of Game and Inland Fisheries agreed with the current project footprint and activities near the rookery.

[a] ERM biologists conducted pedestrian surveys on February 7, 8, and 9, 2017 at rookeries along the project in West Virginia, Virginia, and North Carolina to investigate bird activity at rookeries identified either during aerial survey or from available databases, to evaluate the overall site conditions at the rookery.

Revised Conservation Measures For agency concurrence			
Rookery ID	**County, State**	**Project Segment, near MP**	**Site Description**
NHI Rookery	Southampton County, VA	AP-3, 12.8	Public road is between right-of-way and rookery, within 0.5 mile restriction area. The rookery was not identified as active during 2016 surveys, therefore, may no longer be actively used. Pedestrian surveys were conducted on May 9, 2017, and no evidence of a rookery or bird use was found in the indicated area. No time of year restrictions will be implemented in this location.

Revised Conservation Measures For agency concurrence			
Rookery ID	**County, State**	**Project Segment, near MP**	**Site Description**
CCB Rookery	Southampton County, VA	AP-3, 13.1	Railroad is between right-of-way and rookery, within 0.5 mile restriction area. Due to other human activities between right-of-way and rookery, no restrictions on activities are recommended. The rookery was not identified as active during 2016 surveys, therefore, may no longer be actively used. Pedestrian surveys were conducted on May 9, 2017, and no evidence of a rookery or bird use was found in the indicated area. No time of year restrictions will be implemented in this location.
CCB Rookery	Southampton County, VA	AP-3, 38.5	Rookery was not identified as active during 2016 surveys, may no longer be active. Pedestrian surveys were conducted on May 9, 2017, and bird activity was identified at this rookery: there were 17 occupied great blue heron nests within 10 trees. The rookery is located on the Blackwater River which is planned as an HDD crossing. Workspace at both ends of the drill and an access road to the drill workspace falls within the recommended 0.5 mile no activity buffer (approximately April 1 through August 15). The rookery is approximately 0.2 miles from the workspace on either side of the river. The workspace is unable to be reduced in size or shifted outside of the buffer due to the drill design and requirements. In order to maintain schedule and in-service date for the project, due to the length of time for the HDD and a contingency built in for delays, the active rookery period is not able to be avoided. In order to minimize impacts on the rookery, Dominion will implement the following conservation measures: • Signs will be placed at the edge of the workspace to eliminate risk of vehicle or personnel travel beyond the workspace and closer to the rookery; • Use mufflers on drill equipment to reduce noise levels; and • Lights used at night will be downshielded and directed away from the rookery.

Virginia Department of Historic Resources

COMMONWEALTH of VIRGINIA

Molly Joseph Ward
Secretary of Natural Resources

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

May 26, 2017

Mr. Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Re: *Phase I Historic Architectural Survey of the Atlantic Coast Pipeline Project, Virginia Addendum 2*
DHR File No. 2014-0710

Dear Mr. Gangle:

We have received for review the revised addendum report referenced above dated March 2017 prepared by Dovetail Cultural Resource Group and revised by Environmental Resources Management. The revised document was done at our request in a letter dated March 22, 2017 in order to correct some organizational issues, factual discrepancies, and drafting errors identified during DHR's initial review. Although most of the items in our previous correspondence were addressed, the current report still has a few flaws that need to be corrected as follows:

1. 087-5615 still has a construction date of ca. 1960 in the report tables, but is given the date of 1940 on the V-CRIS form
2. In Table 19, page 57, both 014-5073 and 014-5074 are listed under Cumberland County but are actually located in Buckingham County

Please ensure that these remaining errors are corrected and that one (1) comb-bound archival copy and one (1) digital copy on CD of the final report are provided to DHR.

We look forward to receiving the revised report. If you have any questions about these comments, please do not hesitate to contact me at roger.kirchen@dhr.virginia.gov.

Sincerely,

Roger W. Kirchen, Director
Review and Compliance Division

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033

Eastern Region Office
2801 Kensington Avenue
Richmond, VA 23221
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COMMONWEALTH of VIRGINIA

Molly Joseph Ward
Secretary of Natural Resources

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director

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www.dhr.virginia.gov

June 9, 2017

Mr. Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

Re: *Phase I Archaeological Survey for the Atlantic Coast Pipeline Project, Virginia Addendum Report 4*
Highland, Augusta, Nelson, Buckingham, Cumberland, Prince Edward, Nottoway, Dinwiddie, Brunswick, and Southampton Counties and Cities of Suffolk and Chesapeake, VA
DHR File No. 2014-0710

Dear Mr. Gangle:

The Department of Historic Resources (DHR) has received the report referenced above prepared by Environmental Resource Management (ERM). It is our opinion that this report meets DHR's *Survey Guidelines* and other applicable standards. Our comments are provided as assistance to Atlantic Coast Pipeline, LLC and the Federal Energy Regulatory Commission in meeting their collective responsibility under Section 106 of the National Historic Preservation Act.

This study represents the archaeological survey of 22.9 miles of 300' pipeline corridor, 16.8 miles of 50' access road right-of-way (n=13), two (2) contractor yards, two (2) water impoundments, and the proposed Elizabeth River M&R facility. This survey identified within the study area 14 archaeological sites and five (5) isolated finds. The isolated finds are, by definition, not eligible for listing in the National Register of Historic Places (NRHP) and no further consideration of these resources is warranted.

ERM recommends 11 archaeological sites as not eligible for NRHP listing or do not have NRHP-eligible components within the Area of Potential Effects (APE) and three (3) sites as warranting avoidance or further assessment. Table 3.3-1 contains some recommendations that are inconsistent with the text and when a discrepancy was identified, we assumed the text to be correct. DHR generally concurs with ERM's recommendations except for site 44GV0402. It is our opinion based on the results of the Phase I survey and the Geoarchaeological and Geomorphological Survey (Hajic 2016) that site 44GV0402 is potentially eligible for listing in the NRHP and warrants avoidance or further evaluation to determine the nature and significance of the deeply buried cultural deposits. It is DHR's preference that those sites recommended by ERM as having no contributing components be managed as unevaluated for NRHP listing, but warranting no further work within the APE. Additionally, we recommend avoidance of the cemetery recorded as archaeological site 44BR0340. Details of DHR's recommendations are provided in the attached table.

Thank you for the opportunity to review this work. If you have any questions regarding these comments or our review of this project, please do not hesitate to contact me at roger.kirchen@dhr.virginia.gov.

Sincerely,

Roger W. Kirchen, Director
Review and Compliance Division

c. Mr. Bill Stanyard, ERM

Western Region Office
962 Kime Lane
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Tel: (540) 387-5443
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5357 Main Street
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ATTACHMENT
DHR File No. 2014-0710
June 9, 2017

Site #	Type	ERM Recommendation	DHR Recommendation
44AU0860	Historic Site	Ineligible	Not Eligible
44AU0924	Prehistoric Site	Unknown (avoid or assess)	Potentially Eligible; Avoid or assess
44AU0926	Prehistoric Site	Ineligible	Not Eligible
44BA0928	Prehistoric Site	No Contributing Components	Unevaluated; No Further Work in APE
44BR0321	Prehistoric Site	No Contributing Components	Unevaluated; No Further Work in APE
44BR0340	Historic Cemetery	Ineligible (avoid)	Not Eligible (avoid)
44BR0349	Prehistoric Site	Unknown (avoid or assess)	Potentially Eligible; Avoid or assess
44BR0350	Prehistoric Site	Ineligible	Not Eligible
44DW0475	Prehistoric Site	No Contributing Components (Table 3.3-1 incorrectly reflects “Ineligible” recommendation)	Unevaluated; No Further Work in APE
44GV0402	Prehistoric Site	No Contributing Components (Table 3.3-1 incorrectly reflects “Ineligible” recommendation)	Potentially Eligible; Avoid or assess
44SK0606	Prehistoric Site	No Contributing Components	Unevaluated; No Further Work in APE
44SK0608	Prehistoric Site	Unknown (avoid or assess)	Potentially Eligible (prehistoric component); Avoid or assess
44SN0382	Prehistoric Site	Ineligible	Not Eligible
44SN0383	Prehistoric Site	Ineligible	Not Eligible

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

June 14, 2017

Mr. Blake McDonald, Architectural Survey and Cost Share Program Manager
Division of Survey and Register
Virginia Department of Historic Resources
2801 Kensington Ave.
Richmond, VA 23221

Subject: Section 106 Review –VCRIS Deliverables – Architectural Survey Report Addendum 5 Revisions
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
DHR File No. 2014-0710

Dear Mr. McDonald:

Atlantic Coast Pipeline, LLC (Atlantic) is pleased to submit the requested deliverables for the project referenced above. Enclosed is an archival copy of the sketch map, a CD with digital copies of all photographs and the sketch map, and archival photographs in the requested format. The material enclosed was prepared by Atlantic's consultant, Environmental Resources Management.

The submitted documents should complete the required documentation for the Project. Atlantic would appreciate receipt of a letter acknowledging acceptance of the report by your office. If you have any questions regarding the enclosed documents, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Sketch map, CD of photographs, Archival photographs**

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

June 14, 2017

Mr. Roger Kirchen, Director
Review and Compliance Division
Virginia Department of Historic Resources
2801 Kensington Ave.
Richmond, VA 23221

Subject: Section 106 Review –Architectural Survey Report Addendum 6
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
DHR File No. 2014-0710

Dear Mr. Kirchen:

Atlantic Coast Pipeline, LLC (Atlantic) is pleased to submit the requested deliverables for the project referenced above. Enclosed are archival copies of the V-CRIS forms, archival photographs, and a CD with digital copies of photographs in the requested format. The material enclosed was prepared by Atlantic's consultant, Environmental Resources Management.

The submitted documents should complete the required documentation for the Project. Atlantic would appreciate receipt of a letter acknowledging acceptance of the report by your office. If you have any questions regarding the enclosed documents, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **V-CRIS forms, CD of photographs, Archival photographs**

COMMONWEALTH of VIRGINIA

Molly Joseph Ward
Secretary of Natural Resources

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director

Tel: (804) 367-2323
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www.dhr.virginia.gov

June 14, 2017

Mr. Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Re: *Phase I Historic Architectural Survey of the Atlantic Coast Pipeline Project, Virginia Addendum 3 Revised Report* (April 2017)
DHR File No. 2014-0710

Dear Mr. Gangle:

The Department of Historic Resources (DHR) has received the revised report referenced above prepared by ERM. The document reflects revisions made by the consultant in response to our March 24, 2017 letter in which we commented on the recommendations of the Phase I architectural survey report and pointed out errors and inconsistencies between the information contained in the report and the corresponding VCRIS forms. Although many of our comments were addressed in the current revision, there are still some inaccuracies that need to be addressed. These are detailed below.

1) 007-0480: The DHR does not believe that this property warrants listing in the National Register of Historic Places (NRHP). The dwelling is of a common architectural style and has lost much of its historic integrity.
2) 045-0007: In our letter of 24 March we expressed skepticism with ERM's recommendation that the property is eligible for listing in the NRHP due to many modern additions that have been appended to the original 1826 house. However, due to its early date and claim that it is associated with the Townsend family, early settlers to the area, DHR requested that that Wade House be further studied by completion of a Phase II survey. Instead of doing this the consultant changed the recommendation in the report so that the dwelling is recommended as no longer eligible for listing in the NRHP. Before we can agree, we recommend that the Wade House evaluated at the Phase II level.
3) 133-5481: There is still disagreement between the report, which identifies this property as "Holland Cemetery", and the corresponding VCRIS form which identifies it as "House, 6931 Holy Neck Road". The photographs in the report clear show it as a cemetery; however, the write-up of the property on page 133 directs the reader to the wrong figures in Appendix B.
4) 133-5566: The date given in the report Table 2 still does not agree with the date provided in the corresponding VCRIS form for this property.

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COMMONWEALTH of VIRGINIA

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June 14, 2017

Mr. Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Re: *Phase I Historic Architectural Survey of the Atlantic Coast Pipeline Project, Virginia Addendum 4 Report* (Revised; May 2017)
DHR File No. 2014-0710

Dear Mr. Gangle:

We have received for review the revised addendum report referenced above prepared by ERM. The revised document was prepared to address our April 6, 2017 comments in which DHR disagreed with four of the consultant's National Register of Historic Places (NRHP) eligibility recommendations and pointed out a number of errors and inconsistencies between the report and corresponding VCRIS survey forms for identified properties.

DHR appreciates the revisions to the report which bring it into line with our belief that DHR Inventory Nos. 007-0490, 007-5728, 008-5066, and 133-5443 are not worthy of inclusion in the NRHP. We do find, however, that the revised report still has some errors that require attention. Please see below for our comments:

1) 007-5722: The report describes the resource as a "barn" while the VCRIS form still maintains that it is a "House".
2) 008-0011: The date of construction in Table 1 is given as 1797, but the VCRIS form lists it as c.1816 (previously the VCRIS form had c.1798)
3) 133-0101: The date of construction in Table 1 is given as 1865, but the VCRIS form lists it as c.1826. It is our understanding that the c.1826 date is derived from the recent NRHP form. This should be the date used and the addendum report will need to be changed.

Please ensure that these remaining errors are corrected and that one comb-bound archival copy and one digital copy on CD of the final report are provided to DHR. If you have any questions about these comments, please do not hesitate to contact me at roger.kirchen@dhr.virginia.gov.

Sincerely,

Roger W. Kirchen, Director
Review and Compliance Division

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Please ensure that these remaining discrepancies and errors are corrected. If you have any questions about these comments, please do not hesitate to contact me at roger.kirchen@dhr.virginia.gov.

Sincerely,

Roger W. Kirchen, Director
Review and Compliance Division

c. ERM

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June 28, 2017

Mr. Roger Kirchen, Director
Review and Compliance Division
Virginia Department of Historic Resources
2801 Kensington Ave.
Richmond, VA 23221

Subject: Section 106 Review –Architectural Survey Report Addendum 2
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
DHR File No. 2014-0710

Dear Mr. Kirchen:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting concurrence on the enclosed addendum architectural survey report on investigations conducted for the proposed Atlantic Coast Pipeline (ACP). The comments are based on revision requested by your office on May 26, 2017. The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultants, Dovetail Cultural Resource Group and Environmental Resources Management, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your concurrence on the attached addendum architectural survey report, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed report, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

FOR RICHARD GANGLE

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Architectural Survey Report Addendum 2 – Revised**

COMMONWEALTH of VIRGINIA

Molly Joseph Ward
Secretary of Natural Resources

Department of Historic Resources
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Director

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July 7, 2017

Mr. Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

Re: *Phase I Archaeological Survey for the Atlantic Coast Pipeline Project, Virginia Addendum Report 5*
Highland, Augusta, Nelson, Buckingham, Cumberland, Prince Edward, Nottoway, Dinwiddie, Brunswick, and Southampton Counties and Cities of Suffolk and Chesapeake, VA
DHR File No. 2014-0710

Dear Mr. Gangle:

The Department of Historic Resources (DHR) has received the report referenced above prepared by Environmental Resource Management (ERM). It is our opinion that this report meets DHR's *Survey Guidelines* and other applicable standards. Our comments are provided as assistance to Atlantic Coast Pipeline, LLC and the Federal Energy Regulatory Commission in meeting their collective responsibility under Section 106 of the National Historic Preservation Act.

This study represents the archaeological survey of 16.2 miles of 300' pipeline corridor, 6.2 miles of 50' access road right-of-way (n=17), four (4) water impoundments, and two (2) temporary work spaces. This survey identified within the study area 18 archaeological sites and seven (7) isolated finds. The isolated finds are, by definition, not eligible for listing in the National Register of Historic Places (NRHP) and no further consideration of these resources is warranted.

ERM recommends 15 archaeological sites as not eligible for NRHP listing or do not have NRHP-eligible components within the Area of Potential Effects (APE), one (1) site as NRHP eligible, and two (2) sites as warranting avoidance or further assessment. Table 3.3-1 contains two (2) recommendations that are inconsistent with the text and we assume the text to be correct. DHR generally concurs with ERM's recommendations. It is DHR's preference that those sites recommended by ERM as having no contributing components be managed as unevaluated for

NRHP listing, but warranting no further work within the APE. Details of DHR's recommendations are provided in the attached table.

Thank you for the opportunity to review this work. If you have any questions regarding these comments or our review of this project, please do not hesitate to contact me at roger.kirchen@dhr.virginia.gov.

Sincerely,

Roger W. Kirchen, Director
Review and Compliance Division

c. Mr. Bill Stanyard, ERM

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ATTACHMENT
DHR File No. 2014-0710
July 7, 2017

Site #	Type	ERM Recommendation	DHR Recommendation
44AU0942	Historic Site	Ineligible	Not Eligible
44BA0927	Prehistoric/Historic Site	No Contributing Components	Unevaluated; No Further Work in APE
44BA0929	Prehistoric Site	Ineligible	Not Eligible
44BA0930	Prehistoric Site	Unevaluated (avoid or assess)	Potentially Eligible; Avoid or assess
44BA0931	Prehistoric Site	Ineligible	Not Eligible
44BA0932	Prehistoric Site	Ineligible	Not Eligible
44BA0935	Prehistoric Site	Ineligible	Not Eligible
44BA0936	Prehistoric Site	No Contributing Components	Unevaluated; No Further Work in APE
44BK0388	Prehistoric Site	No Contributing Components (Table 3.3-1 incorrectly reflects "Ineligible" recommendation)	Unevaluated; No Further Work in APE
44CS0346	Prehistoric Site	Unevaluated (avoid or assess)	Potentially Eligible; Avoid or assess
44DW0456	Prehistoric Site	No Contributing Components	Unevaluated; No Further Work in APE
44HD0156	Prehistoric Site	No Contributing Components	Unevaluated; No Further Work in APE
44NE0208	Prehistoric Site	Ineligible	Not Eligible
44NE0209	Prehistoric/Historic Site	No Contributing Components	Unevaluated; No Further Work in APE
44NE0210	Prehistoric Site	No Contributing Components	Unevaluated; No Further Work in APE
44NE0212	Prehistoric Site	No Contributing Components	Unevaluated; No Further Work in APE
44SK0607	Prehistoric/Historic Site	No Contributing Components	Unevaluated; No Further Work in APE
44SK0612	Prehistoric/Historic Site	Eligible (Table 3.3-1 incorrectly reflects "Unevaluated" recommendation)	Eligible

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July 11, 2017

Mr. Roger Kirchen, Director
Review and Compliance Division
Virginia Department of Historic Resources
2801 Kensington Ave.
Richmond, VA 23221

Subject: Section 106 Review –Architectural Survey Report Addendum 5 - Revised
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
DHR File No. 2014-0710

Dear Mr. Kirchen:

Atlantic Coast Pipeline, LLC (Atlantic) is submitting the final enclosed revised addendum architectural survey report on investigations conducted for the proposed Atlantic Coast Pipeline (ACP). The comments are based on revisions requested by your office on June 30, 2017. Changes have also been submitted to VCRIS to reconcile the report and inventory forms. The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, Environmental Resources Management, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic appreciates your concurrence on the attached addendum architectural survey report, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed report, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Architectural Survey Report Addendum 5 – Revised, CD**

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 11, 2017

Mr. Roger Kirchen, Director
Review and Compliance Division
Virginia Department of Historic Resources
2801 Kensington Ave.
Richmond, VA 23221

Subject: Section 106 Review –Initial Assessment of Potential Effects for Architectural Resources Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project DHR File No. 2014-0710

Dear Mr. Kirchen:

Atlantic Coast Pipeline, LLC (Atlantic) is submitting the revised Appendix B based on feedback received during the June 29, 2017 meeting. The enclosed Appendix B is a hard copy of what you received via email transmission on July 7, 2017. Also per your email request, please find a copy of the revised report on the enclosed CDs. The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultants, Dovetail Cultural Resource Group and Environmental Resources Management, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments, on the architecture survey report, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed report, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Initial Assessment of Potential Effects for Architectural Resources revised Appendix B, CD**

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 14, 2017

Mr. Roger Kirchen, Director
Review and Compliance Division
Virginia Department of Historic Resources
2801 Kensington Ave.
Richmond, VA 23221

Subject: Section 106 Review –Architectural Survey Report Addendum 4
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
DHR File No. 2014-0710

Dear Mr. Kirchen:

Atlantic Coast Pipeline, LLC (Atlantic) is submitting the final enclosed revised addendum architectural survey report on investigations conducted for the proposed Atlantic Coast Pipeline (ACP). The comments are based on revision requested by your office on June 14, 2017. The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultants, Dovetail Cultural Resource Group and Environmental Resources Management, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic appreciates your concurrence on the attached addendum architectural survey report, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed report, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosures: **Architectural Survey Report Addendum 4 – Revised, and CD**

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
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July 18, 2017

Mr. Roger Kirchen, Director
Review and Compliance Division
Virginia Department of Historic Resources
2801 Kensington Ave.
Richmond, VA 23221

Subject: Section 106 Review –Cemetery Protective Treatment Plan
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
DHR File No. 2014-0710

Dear Mr. Kirchen:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed cemetery protective treatment plan on investigations conducted for the proposed Atlantic Coast Pipeline (ACP). The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the attached cemetery protective treatment plan, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed reports, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Cemetery Protective Treatment Plan**

Dominion Energy Services, Inc.
5000 Dominion Boulevard
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DominionEnergy.com

July 19, 2017

Mr. Roger Kirchen, Director
Review and Compliance Division
Virginia Department of Historic Resources
2801 Kensington Ave.
Richmond, VA 23221

Subject: Section 106 Review –Archaeological Survey Report Addendum 6
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
DHR File No. 2014-0710

Dear Mr. Kirchen:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed addendum archaeological survey report on investigations conducted for the proposed Atlantic Coast Pipeline (ACP). The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the attached addendum report, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed reports, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Archaeological Survey Report Addendum 6**

Dominion Energy Services, Inc.
5000 Dominion Boulevard
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DominionEnergy.com

July 21, 2017

Mr. Roger Kirchen, Director
Review and Compliance Division
Virginia Department of Historic Resources
2801 Kensington Ave.
Richmond, VA 23221

Subject: Section 106 Review – Visual Impact Assessment
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
DHR File No. 2014-0710

Dear Mr. Kirchen:

At the request of the National Park Service, Atlantic Coast Pipeline, LLC (Atlantic) is submitting the enclosed visual impact assessment report (on DVD), which addresses potential visual impacts and mitigation for the Atlantic Coast Pipeline (ACP) project, including for the Blue Ridge Parkway and Appalachian National Scenic Trail. Hard copy of the report will be provided under separate cover.

Atlantic appreciates your continuing assistance with the ACP. If you have any questions regarding the enclosed report, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosures: **Visual Impact Assessment Report (DVD)**
Viewing Instructions for High Resolution Images

Dominion Energy Services, Inc.
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July 27, 2017

Mr. Roger Kirchen, Director
Review and Compliance Division
Virginia Department of Historic Resources
2801 Kensington Ave.
Richmond, VA 23221

Subject: Section 106 Review – Phase I Historic Architectural Survey Report Revised Addendum 3
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
DHR File No. 2014-0710

Dear Mr. Kirchen:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed revised addendum architectural survey report on investigations conducted for the proposed Atlantic Coast Pipeline (ACP). Revisions are based on the June 14, 2017 letter. The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the enclosed document, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed reports, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Phase I Historic Architectural Survey Report Revised Addendum 3**

Dominion Energy Services, Inc.
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DominionEnergy.com

July 27, 2017

Mr. Roger Kirchen, Director
Review and Compliance Division
Virginia Department of Historic Resources
2801 Kensington Ave.
Richmond, VA 23221

Subject: Section 106 Review – Phase I Historic Architecture Survey Assessment of Effects
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
DHR File No. 2014-0710

Dear Mr. Kirchen:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed assessment of effects architecture report, which reports on investigations conducted for the proposed Atlantic Coast Pipeline (ACP). The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the enclosed document, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed reports, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

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5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Phase I Historic Architecture Survey Assessment of Effects Report**

North Carolina Agencies

North Carolina Department of Natural and Cultural Resources

North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

February 6, 2017

Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Blvd.
Glen Allen, VA 23060

Richard.B.Gangle@dom.com

RE: Addendum 3 to Phase I Historic Architecture Survey Report, Atlantic Coast Pipeline, Multi County, ER 14-1475

Dear Mr. Gangle:

Thank you for your letter of January 9, 2017, transmitting the above-referenced report addendum. We have reviewed the report and offer the following comments.

We concur that the Jackson Plantation (CD1465) is eligible for listing in the National Register of Historic Places under Criteria A and B. However, minus more information on the interiors of the house, we are unable to concur that it is eligible under Criterion C.

We also concur that, barring additional information to the contrary, the other eleven properties evaluated in the report (CD1466-1476) are not eligible for listing in the National Register.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona M. Bartos

North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

May 5, 2017

Robert Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
Richard.B.Gangle@dom.com

Re: Phase I Archaeological Survey for the Atlantic Coast Pipeline Project, North Carolina Addendum Report 4, Cumberland, Halifax, Johnston, and Robeson Counties, ER 14-1475

Dear Mr. Gangle:

We have received Robert M. Bisha's letter of February 24, 2017, forwarding copies of the above-referenced report by Environmental Resource Management (ERM) and would like to comment.

During the course of the survey, nine sites were located within the project area. Seven have been recommended as not eligible for the National Register of Historic Places (NRHP).

The following properties are determined not eligible for listing in the National Register of Historic Places: 31CD2130, 31CD2131, 31HX484**, 31HX485, 31HX486, 31JT493, and 31JT501. Because of a lack of integrity these sites have no further information value. Mr. William Stanyard of ERM has recommended that no further archaeological investigation be conducted in connection with these sites, allowing work to proceed in their areas. We concur with this recommendation.

The sites recommended for avoidance or Phase II testing by ERM to determine their eligibility for the NRHP are 31JT491 and 31RB574. We concur with this recommendation for 31JT491. We do not concur with this recommendation for 31RB574.

After careful consideration of the information presented for 31RB574, we feel sufficient information was gathered at the Phase I level of investigation to evaluate it. It is our opinion that 31RB574 is not eligible for the NRHP. It is unlikely to provide additional information on the prehistory or history of the area. We, therefore, recommend that no additional archaeological investigation be conducted in connection with this site, allowing work to proceed in its area.

Please see attached for several editorial comments.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona M. Bartos

enclosure (editorial comments)

cc: Bill Stanyard, Environmental Resource Management, bill.stanyard@nrg-llc.com

Editorial comments

- In the body of the report the appendix including maps is called Appendix A; on the maps it's called Appendix 1. Please make consistent.
- With the OSA's pending revised guidelines (due 5/31/17), isolate finds will be recognized as any other site. Accordingly, we request future reports describe them in the same manner as larger sites, providing both a table presenting their information, a sketch map, and photographs of the site area and artifacts, as appropriate.
- One table listing all sites recorded during the survey would be very helpful. Include revisits and identify them as such.

North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office
Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

June 2, 2017

Robert M. Bisha, Technical Advisor, Atlantic Coast Pipeline
Dominion Resources Services, Inc.
5000 Dominion Blvd.
Glen Allen, VA 23060

Re: Phase I Historic Architectural Survey of the Atlantic Coast Pipeline Project, Addendum 4 and Updated NRHP Findings, Multi County, ER 14-1475

Dear Mr. Bisha:

We are in receipt of your letter of April 25, 2017, transmitting the above-referenced addendum and updated NRHP findings for the Atlantic Pipeline Project, an undertaking that runs through several North Carolina counties and has the potential to affect properties listed in or eligible for listing in the National Register of Historic Places. At your request, we provide our comments on the two items listed above and provide a copy to Richard B. Gangle, Dominion Resources Services, Inc.

We concur with the National Register eligibility recommendations for the forty-one (41) properties listed in *Table 1: Summary of Resources in the APE* on pages 26-27, with the following exceptions or comments.

Stevens Sausage Company Office/Homeplace (JT1920): This property is considered eligible under Criterion A, but should not be considered eligible under Criterion B. It is unclear in the assessment whether Criterion B is being claimed for N.S. Stevens or his son N.S. Stevens, Jr, although it appears that the claim is for Stevens, Jr. who inherited the business from his father. The supporting argument for importance is insufficient, noting that Stevens was "a successful businessman and was active in community service." This does not provide a solid argument for why he is of transcendent importance and may prove difficult to support.

Stevens Sausage Factory (JT1921): See comment above about Criterion B. Additionally, the loss of integrity affects the property's eligibility for Criterion A. Several later additions and alterations have resulted in a loss of integrity. Due to that loss of integrity, we believe the property it is not eligible for National Register listing under any criteria.

Vernacular Dwelling with Craftsman details (NS1493): There is so little information about this property that we believe it should be considered not eligible. If the owner were to disagree with this evaluation, it will be incumbent upon him/her to provide the information needed to make such a determination.

We would like to note that there are several properties assessed as eligible under Criteria A and C or B and C. However, until more information is available about the interiors of these properties, we will not consider them eligible under Criterion C. These are: CD1477, JT1860, NS0650, NS1493, RB0678. If or when information about the interiors becomes available, we will reconsider their eligibility under Criterion C. This same finding applies to the Smith-Lee House (JT0957) which may prove eligible under Criterion C, but for which there is no information about the interiors.

With regard to the two properties for which updates were provided in your April 25, 2017, letter, we concur with the findings that:

Ca. 1920 American Foursquare (CD1457) is not eligible for listing in the National Register.

Ca. 1846 I-house (Plantation Plan with Queen Anne updates) (CD1465) is eligible under Criteria A and B.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona M. Bartos

cc: Richard B. Gangle, Dominion, Richard.b.gangle@eom.com

North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

June 2, 2017

Richard Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
Richard.B.Gangle@dom.com

Re: Phase II investigations, sites 31CD2018, 31CD2055, 31CD2093, 31CD2099, and 31CD2109; Atlantic Coast Pipeline Project, Cumberland County, ER 14-1475

Dear Mr. Gangle:

We have received Robert M. Bisha's letter of March 24, 2017, forwarding copies of the above-referenced report by Environmental Resource Management (ERM) and would like to comment.

During the course of the investigations, five sites were revisited and tested to evaluate their eligibility for the National Register of Historic Places.

Those portions of 31CD2018, 31CD2093, 31CD2099, and 31CD2109 within the project corridor, as proposed, are determined not eligible for listing in the National Register of Historic Places. They lack integrity and have no further information value. Mr. William Stanyard of ERM has recommended that no further archaeological investigation be conducted in connection with them, allowing work to proceed in their areas. We concur with this recommendation, noting that only those portions of 31CD2018 and 31CD2099 within the corridor were tested for evaluation. Should the corridor route change and possibly affect the untested portions of these two sites, please contact us so we may consider if additional investigation is warranted at 31CD2018 and 31CD2099.

A fifth site, 31CD2055, was evaluated by Mr. Stanyard as being eligible for the National Register of Historic Places (NRHP), presumably under Criterion D, though this was not expressly stated in the report. After careful consideration of the documentation presented for 31CD2055, we feel sufficient information was gathered at the Phase II level of investigation for us to conclude that 31CD2055 is not eligible for the NRHP. We believe it is unlikely to yield significant data on the prehistory of the area and recommend that no further archaeological investigations by conducted at it, allowing work to proceed in its area as well as that of the four previously described sites.

Please see the attached page for editorial comments.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona M. Bartos

attachment

cc: Bill Stanyard, Natural Resource Group, bill.stanyard@nrg-llc.com

Editorial Comments

On Page 42, please correct the site number in Table 5-3 to 31CD2018.
On Page 67, change one Halifax (Middle Archaic) to one Palmer (Early Archaic).

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

June 28, 2017

Renee Gledhill-Earley
State Historic Preservation Office
109 East Jones Street, Room 258
Raleigh, NC 27601

Subject: Section 106 Review –Phase I Historic Architecture Survey Report
Addendum 4 Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
File No. Multi-County ER 14-1475

Dear Ms. Gledhill-Earley:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed revised addendum architecture survey report, which reports on investigations conducted for the proposed Atlantic Coast Pipeline (ACP). These revisions are based on the June 2, 2017 letter received from your office. The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the attached addendum architecture survey report, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed report, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

FOR RICHARD GANGLE

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)
Enclosure: **Phase I Historic Architecture Survey Report Addendum 4 - Revised**

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

Dominion Energy®

June 28, 2017

Renee Gledhill-Earley
State Historic Preservation Office
109 East Jones Street, Room 258
Raleigh, NC 27601

Subject: Section 106 Review –Phase I Historic Architecture Survey Report
Addendum 5 Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
File No. Multi-County ER 14-1475

Dear Ms. Gledhill-Earley:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed addendum architecture survey report, which reports on investigations conducted for the proposed Atlantic Coast Pipeline (ACP). The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the attached addendum architecture survey report, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed report, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

RICHARD GANGLE

FOR Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)
Enclosure: **Phase I Historic Architecture Survey Report Addendum 5**

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 11, 2017

Renee Gledhill-Earley
State Historic Preservation Office
109 East Jones Street, Room 258
Raleigh, NC 27601

Subject: Section 106 Review –Addendum 5 North Carolina Phase I Archaeological Survey Report, Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project File No. Multi-County ER 14-1475

Dear Ms. Gledhill-Earley:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed addendum archaeological survey report, which describes results for surveys completed between February 1 and May 31, 2017, for the proposed Atlantic Coast Pipeline (Project). The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for the Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report to assist FERC in complying with Section 106 of the National Historic Preservation Act, as amended.

Atlantic would appreciate your comments on the enclosed addendum report, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed reports, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: Addendum 5: North Carolina Phase I Archaeological Survey Report

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 18, 2017

Renee Gledhill-Earley
State Historic Preservation Office
109 East Jones Street, Room 258
Raleigh, NC 27601

Subject: Section 106 Review –Cemetery Protective Treatment Plan
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
File No. Multi-County ER 14-1475

Dear Ms. Gledhill-Earley:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed cemetery protective treatment plan on investigations conducted for the proposed Atlantic Coast Pipeline (ACP). The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the attached cemetery protective treatment plan, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed reports, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Cemetery Protective Treatment Plan**

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 25, 2017

Renee Gledhill-Earley
State Historic Preservation Office
109 East Jones Street, Room 258
Raleigh, NC 27601

Subject: **Section 106 Review –Phase II Investigations Sites 31NS156, 31RB524, and 31WL374 Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project File No. Multi-County ER 14-1475**

Dear Ms. Gledhill-Earley:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed Phase II report on investigations conducted for the proposed Atlantic Coast Pipeline (ACP) in June and July 2017. The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the enclosed addendum report, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed reports, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Phase II Investigations Sites 31NS156, 31RB524, and 31WL374**

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 25, 2017

Renee Gledhill-Earley
State Historic Preservation Office
109 East Jones Street, Room 258
Raleigh, NC 27601

Subject: Section 106 Review –Archaeological Site Avoidance Plans and Data Recovery Research Designs
Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline Project
File No. Multi-County ER 14-1475

Dear Ms. Gledhill-Earley:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed Archaeological Site Avoidance Plans and Data Recovery Research Designs for the proposed Atlantic Coast Pipeline (ACP). The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the enclosed document, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed reports, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dominionenergy.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion Energy)

Enclosure: **Archaeological Site Avoidance Plans and Data Recovery Research Designs**

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 27, 2017

Renee Gledhill-Earley
State Historic Preservation Office
109 East Jones Street, Room 258
Raleigh, NC 27601

Subject: **Section 106 Review –Phase I Historic Architecture Survey Assessment of Effects Report, Atlantic Coast Pipeline, LLC, Atlantic Coast Pipeline File No. Multi-County ER 14-1475**

Dear Ms. Gledhill-Earley:

Atlantic Coast Pipeline, LLC (Atlantic) is requesting review and comment on the enclosed assessment of effects architecture report, which reports on investigations conducted for the proposed Atlantic Coast Pipeline (Project). The Federal Energy Regulatory Commission (FERC) is the lead Federal agency for this Project. Atlantic's consultant, ERM, conducted the survey and prepared the enclosed report pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended.

Atlantic would appreciate your comments on the attached assessment of effects architecture report, and we look forward to continuing to work with you on this Project. If you have any questions regarding the enclosed report, please contact Richard B. Gangle at (804) 273-2814 or Richard.B.Gangle@dom.com, or by letter at:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Respectfully submitted,

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Richard Gangle (Dominion)

Enclosure: **Phase I Historic Architecture Survey Assessment of Effects Report**

North Carolina Wildlife Resources Commission

Tracy Brunner

From: Tracy Brunner
Sent: Thursday, July 20, 2017 8:42 AM
To: Tracy Brunner
Subject: FW: Comments re. Rookeries and HEA

From: Garrison, Gabriela [mailto:gabriela.garrison@ncwildlife.org]
Sent: Thursday, May 25, 2017 7:59 PM
To: Sara Throndson
Cc: Stancil, Vann F
Subject: Comments re. Rookeries and HEA

Hi Sara,

We have reviewed the conservation measures for rookeries in North Carolina and have some concerns. For WBC01 in Johnston County, it is stated that these birds may be accustomed to human disturbance. This is a blanket generalization that is not necessarily safe to assume for a colony that has not been studied or monitored. In addition, the existing level of disturbance that the birds *may be* accustomed to would likely be different than the level of disturbance they would encounter because of clearing and construction activities associated with the ACP. Without monitoring these nests, it would be difficult to ascertain how the birds may be affected. Additionally, these same assumptions can be applied to another statement in the conservation measures: "if the birds return while construction activities are occurring, they are not expected to be disturbed and activities will continue as planned". Without active and ongoing monitoring, you cannot assume that the birds will not be disturbed due to construction activities. It's possible that only some birds may return and acclimate to the disturbance. It's also possible that no birds will return as a direct result of construction activities. There is limited research on this topic. On state-owned lands, access to rookeries and surrounding lands is completely prohibited during breeding season months due to the high susceptibility of these birds to human activities. We understand that this is an unrealistic option on privately-owned lands. However, we continue to recommend that construction activities do not occur within 0.5-mile of each rookery from February 15-July 31. Therefore, any construction activities begun prior to February 15th should cease by February 15th, allowing the birds to return to their rookeries with no added disturbance.

Vann (Stancil) and I met with our two direct supervisors yesterday in order to discuss the Habitat Equivalency Analysis and upland habitat impacts from the ACP in North Carolina. It is our understanding the USFWS has removed themselves from this discussion. As such, NCWRC would like to start a dialogue with Atlantic and associated personnel regarding impacts resulting from habitat loss/fragmentation and potential mitigation.

We look forward to continued discussion and appreciate your willingness to address our concerns. Thank you!

Gabriela

Gabriela Garrison

Eastern Piedmont Habitat Conservation Coordinator

NC Wildlife Resources Commission

Sandhills Depot, P.O. Box 149

Hoffman, NC 28347

Office and Cell: 910-409-7350
gabriela.garrison@ncwildlife.org

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Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

July 28, 2017

BY EMAIL

Gabriela Garrison
NC Wildlife Resources Commission
Sandhills Depot, P.O. Box 149
Hoffman, NC 28347

Re: Dominion Energy, Inc., Atlantic Coast Pipeline (ACP)
North Carolina Rookeries, Follow-Up

Dear Ms. Garrison,

A letter regarding rookeries identified in North Carolina was sent to your office on April 12, 2017. Dominion Energy received a response on May 25, 2017. To summarize, in North Carolina, the buffers of 10 rookeries were identified as overlapping with construction workspace. Conservation measures for six of these rookeries (WBC 05, WBC 07, WBC 08, WBC 09, WBC 11, and WBC 15) remain unchanged from the April 12 letter. Attached is a memo containing updated proposed conservation measures for the remaining four rookeries of concern.

Project and Company Background

Atlantic Coast Pipeline, LLC (Atlantic) is a company formed by four major U.S. energy companies – Dominion Energy, Inc., Duke Energy Corporation, Piedmont Natural Gas Co., Inc., and Southern Gas Company. Atlantic will own and operate the proposed ACP, an approximately 600-mile-long, interstate natural gas transmission pipeline system designed to meet growing energy needs in Virginia and North Carolina. The ACP will deliver up to 1.5 billion cubic feet per day (bcf/d) of natural gas to be used to generate electricity, heat homes, and run local businesses. The underground pipeline project will facilitate cleaner air, increase reliability and security of natural gas supplies, and provide a significant economic boost in Virginia and North Carolina.

Atlantic has contracted with Dominion Energy Transmission, Inc. (DETI), a subsidiary of Dominion Energy, to permit, build, and operate the ACP on behalf of Atlantic. The ACP will be regulated by the Federal Energy Regulatory Commission (FERC) under Section 7(c) of the Natural Gas Act. The ACP is subject to review by FERC under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, as well as other environmental and natural resource laws.

Atlantic requests your concurrence on the proposed conservation measures for rookeries in North Carolina. Please contact Mr. Richard B. Gangle at (804) 273-2814 or

Richard.B.Gangle@dom.com, if there are questions regarding this information. Please direct written responses to:

Richard B. Gangle
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

FOR RICHARD GANGLE

Robert M. Bisha
Technical Advisor, Atlantic Coast Pipeline

Cc: John Ellis, U.S. Fish and Wildlife Service Raleigh Field Office

Attachments:

ACP North Carolina Rookery Review Memo

Colonial Wading Bird Rookeries
Atlantic Coast Pipeline Project, North Carolina
July 28, 2017

Rookery ID	County, State	Project Segment, near MP	Survey Notes [a]	Proposed Conservation Measures
WBC 01	Halifax County, NC	AP-2, 31.8	Rookery was not directly accessible; however, rookery was observed from I-95 in general location as originally indicated. Rookery was active at time of visit, with multiple birds seen.	Vegetation buffer overlaps workspace; however it overlaps in an agricultural field. Workspace does not impact vegetation rookery is located in; no need to reduce workspace footprint. Time of year restriction buffer would not be necessary north of highway 481 due to existing highway corridor, and recommend allowing construction activities in agricultural area at southern end of restriction buffer (north of project milepost 31.45 and south of project milepost 32.15 construction activities would be allowed). Construction will begin within the buffer prior to birds returning to the rookery (assumed February); if the birds return while construction activities are occurring, they are not expected to be disturbed by those construction activities continuing. If construction activities do not begin prior to birds returning to the rookery, the time of year restriction will be adhered to between the highway and agricultural fields to the south (between project mileposts 31.45 and 32.15).
WBC 02	Nash County, NC	AP-2, 48.0	Several nests observed, but not active at time of visit. No birds were observed at the site. Crews spoke with landowner who indicated that the herons have had mixed success at the site and that one of the nest trees (a snag pine) had fallen down in the last two years. Updated location point collected.	Vegetation buffer does not overlap workspace; no change to workspace needed. Time of year restriction buffer would not be necessary south of Reges Store Road (project milepost 48.38), due to the traffic and housing developments in the area. Construction will begin within the buffer prior to birds returning to the rookery (assumed February); if the birds return while construction activities are occurring, they are not expected to be disturbed by those construction activities continuing. If construction activities do not begin prior to birds returning to the rookery, the time of year restriction will be adhered to north of Reges Store to the northern boundary of the buffer near project milepost 47.5.

Rookery ID	County, State	Project Segment, near MP	Survey Notes [a]	Proposed Conservation Measures
WBC 04	Nash County, NC	AP-2, 55.8	Single nest observed in open water; it was not active at time of survey, but wading birds were heard in the area. Updated location point collected.	Vegetation buffer does not overlap workspace; no change to workspace needed. Due to existing human disturbance and agricultural areas, time of year restrictions are not necessary between project mileposts 55.35 and 55.70. Construction will begin within the buffer prior to birds returning to the rookery (assumed February); if the birds return while construction activities are occurring, they are not expected to be disturbed by those construction activities continuing. If construction activities do not begin prior to birds returning to the rookery, the time of year restriction will be adhered to between project mileposts 55.70 and 56.20.
WBC 05	Nash County, NC	AP-2, 62.6	No access, rookery not visible from public land or adjacent approved tracts.	Due to the distance of the rookery to the right-of-way (0.4) mile, thick vegetation between the rookery and right-of-way, and agricultural area in the workspace where the time of year restriction would apply, the time of year restriction is not necessary to protect the rookery from disturbance.
WBC 09	Johnston County, NC	AP-2, 106.6	Several nests observed, bird activity was noted at time of survey; only one great blue heron seen at rookery at time of survey. Nests were small, indicating could potentially be used by smaller herons such as night herons. Updated location point collected.	Workspace falls within 500-foot vegetation clearing restriction. Portion of vegetation clearing restriction area is in area previously cleared; therefore vegetation clearing restriction would not apply in this area. There would be impacts to a portion of the vegetation within 500 feet of the rookery. The current route avoids inundated wetlands to the east and west which would cause a constructability issue if the route were shifted outside of the buffer. In addition, if the route were shifted, there would be more impacts on wetland resources. The time of year restriction (no activity from Feb. 15 through July 31, when rookery is actively used) will be adhered to for mainline construction. Access road improvements (including widening of the road and adding gravel) may occur during the recommended time of year restriction; however the road is an existing road in a mostly agricultural landscape approximately 0.32 mile (1,600 feet) from the rookery.
WBC 12	Cumberland County, NC	AP-2, 123.5	Rookery was active at time of visit. Rookery is in swampy wetland habitat, which is impassable on foot or 4x4. Location did not require adjustment.	Vegetation buffer does not overlap workspace; no change to workspace needed. Construction will begin within the buffer prior to birds returning to the rookery (assumed February); if the birds return while construction activities are occurring, they are not expected to be disturbed by those construction activities continuing. If construction activities do not begin prior to birds returning to the rookery, the time of year restriction will be adhered to.

Rookery ID	County, State	Project Segment, near MP	Survey Notes [a]	Proposed Conservation Measures
[a] ERM biologists conducted pedestrian surveys on February 7, 8, and 9, 2017 at rookeries along the project in West Virginia, Virginia, and North Carolina to investigate bird activity at rookeries identified either during aerial survey or from available databases, to evaluate the overall site conditions at the rookery.				

Proposed Measures in Migratory Bird Plan, For agency concurrence			
Rookery ID	**County, State**	**Project Segment, near MP**	**Site Description**
WBC 07	Wilson County, NC	AP-2, 70.5	Public road and houses are between right-of-way and rookery, within 0.5 mile restriction area. Due to other human activities between right-of-way and rookery, no restrictions on activities are recommended.
WBC 08	Wilson County, NC	AP-2, 74.2	Edge of restriction buffer reaches project access road; road is an existing public road. No restrictions are recommended.
WBC 11	Sampson County, NC	AP-2, 117.2	Workspace falls at edge of 0.5 mile buffer; significant vegetation lies between workspace and rookery. Recommend no restrictions due to distance from rookery.
WBC 15	Cumberland County, NC	AP-2, 124.5	Highway 95 is between right-of-way and rookery, within 0.5 mile restriction area. Due to other human activities between right-of-way and rookery, no restrictions on activities are recommended.