



ATLANTIC COAST PIPELINE, LLC
ATLANTIC COAST PIPELINE
Docket No. **CP15-554-000 &**
CP15-554-001

and



DOMINION TRANSMISSION, INC.
SUPPLY HEADER PROJECT
Docket No. **CP15-555-000**

Response to Data Request
Dated April 11, 2017

Prepared by



an ERM Group company

May 8, 2017

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
Response to Data Request
Dated April 11, 2017

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- | | |
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GENERAL

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
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Category: General

Question Number: 3 **Question Subpart:** N/A

Question:

We received numerous comments on the draft environmental impact statement (EIS) questioning the need for the relatively large number of temporary and permanent access roads. Limit the number of access roads to that necessary to construct and operate the ACP and SHP. The following access roads may be redundant or unnecessary. Therefore, remove them or provide justification for their need. Note that we are requesting that Atlantic and DTI conduct a thorough review of the entire project to determine where access road reductions can be achieved, not just the three roads identified below.

- a. AP-1 MP 64, access road 04-002-B025.AR1
- b. AP-1 MP 90, access road 06-001-C028.AR2
- c. AP-1 MP 92, access road 06-001-C037.AR3

Response:

As noted in Atlantic's response to the June 13, 2016 data request (FERC Accession Number 20160701-5255), the locations of access roads have been optimized to support safe transportation of personnel, equipment, and materials to the right-of-way. Additionally, Atlantic has reviewed and revised the number and location of access roads to minimize environmental impacts and accommodate landowner requests. Regarding the three access roads referenced in Question 3 above:

- a. AP-1 MP 64, Access Road 04-002-B025.AR1:

This access road has been removed from the ACP to minimize environmental impacts to an endangered or sensitive plant species mapped during the survey process.

- b. AP-1 MP 90, Access Road 06-001-C028.AR2:

The proposed access roads in the vicinity of MP 90 have been selected to allow construction and operation in this area of steep and difficult terrain. Access Road 06-001-C028.AR2 accommodates access to the top of a steep slope (>50 percent) beginning at MP 89.8. The adjacent road, 06-001-C026.AR1, is planned to allow access to the top of Back Creek Mountain and support movement of personnel, equipment, and materials along the right-of-way. The slope from the ridge top (approximately MP 89.7) to Access Road 06-001-C028.AR2 exceeds 50 percent. Based on this information, Access Road access road 06-001-C028.AR2 is necessary for the Project.

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c. AP-1 MP 92, Access Road 06-001-C037.AR3:

Access Road 06-001-C037 allows construction access to the base of a slope while avoiding crossing the Jackson River. Access Road 06-001C037.AR1 in the vicinity provides access to the top of a steep slope which is approximately 56 percent. These two roads are necessary to allow construction of the pipeline in an area of steep terrain.

The approach to selecting access roads as indicated above and as described in Atlantic’s and DTI’s response to the June 13, 2016 data request (FERC Accession Number 20160701-5255) was used to conduct a review of the proposed access roads identified in Q6 Attachment 1. Twenty-one access roads have been removed from the Project. The list of access roads removed is provided in Table 3-1.

Response Provided By:

Carole McCoy
 Director of Engineering Services
 804-775-5234

TABLE 3-1
Access Roads Removed from the Atlantic Coast Pipeline
Access Road ID
04-002-A005.AR-AR 1
04-002-B011.AR3
04-002-B025.AR1
05-001-C009.AR2
05-001-C013.AR1
07-001-A055.AR1
07-001-F014.AR1
07-058-E036.AR-AR 2
08-001-B012.AR3
09-045.AR-AR 1
10-044.AR 1
12-014.AR1
13-019-A014.AR1
14-107.AR 1
18-001.AR2
22-050.AR 1
27-045.AR1
36-014.AR3
36-033-A001.AR1
36-033-A001.AR2
36-081.AR1

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Category: General

Question Number: 5 **Question Subpart:** N/A

Question:

Provide additional information on the workspace design, antenna height, tower guide wire installation, and lighting associated with the communication towers proposed at ACP and SHP aboveground facilities, and at non-leased properties that would require Section 7 authorization.

Response:

A list of the proposed communication towers located on non-leased properties associated with the ACP is provided in Table 5-1. The list includes the tower type and height, a list of the facilities in the tower area, and plans for utility lines and access roads.

All towers higher than 199 feet above ground level will have lighting in accordance with Federal Aviation Administration lighting regulations. Information regarding the lighting systems for the lighted towers is also provided in Table 5-1.

A list of the antenna heights for each tower is provided in Table 5-2.

None of the towers will have guy wires.

No communication towers are proposed for SHP.

Response Provided By:

Carole McCoy
Director Engineering Services
804-775-5234

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Table 5-1						
Communication Tower Information – New Towers at Atlantic Coast Pipeline Aboveground Facilities (Note 1)						
Communication Tower Site	Tower Type	Tower Height (Note 2)	Workspace Design	Utility Lines	Access Road	Lighting (Note 4)
Compressor Station 1 - Marts	Lattice	355	Fence, Tower, Shelter	Note 3	Note 3	Flash (E-2)
Long Run M&R Station	Lattice	355	Fence, Tower	Note 3	Note 3	Flash (E-2)
Compressor Station 2 - Buckingham	Lattice	198	Fence, Tower, Shelter	Note 3	Note 3	None
ACP Valve Site 18 - Wilson	Lattice	230	Fence, Tower, Shelter, Generator, Propane Tank	Note 3	Note 3	Flash (E-1)
ACP Valve Site 19 - Upson	Lattice	235	Fence, Tower, Shelter, Generator, Propane Tank	Note 3	Note 3	Flash (E-1)
Compressor Station 3 - Northampton	Lattice	295	Fence, Tower, Shelter	Note 3	Note 3	Flash (E-1)
Smithfield M&R Station	Lattice	270	Fence, Tower	Note 3	Note 3	Flash (E-1)
Fayetteville M&R Station	Lattice	285	Fence, Tower	Note 3	Note 3	Flash (E-1)
Pembroke M&R Station	Lattice	350	Fence, Tower	Note 3	Note 3	Flash (E-1)
Elizabeth River M&R Station	Monopole	105	Fence, Tower	Note 3	Note 3	None
Greensville M&R Station	Lattice	250	Fence, Tower	Note 3	Note 3	Flash (E-1)
Note 1: The communication tower at the Brunswick M&R Station is no longer needed and has been removed from the Project. Note 2: Feet Above Ground Level. Includes lightning rod. Note 3: The communication tower facility will use the utility lines and access road that will be constructed for the ACP aboveground facility. Note 4: Flash (E1) = Flash (E1) Dual LED Vanguard 2 (Avian Compliant) (for towers from 200 - 350 feet in height). Flash (E2) = Flash (E2) Dual LED Vanguard 2 (Avian Compliant) (for towers from 351 – 700 feet in height).						

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Table 5-2		
Communication Tower Antenna Height Information		
Site / Antenna	Tower Height / Antenna Height - Mounting Point Feet Above Ground Level Note 1	Antenna Height - Highest Point Feet Above Ground Level
Compressor Station 1 - Marts	Tower Height: 355 feet	
Antenna 1	345.0	349.0
Antenna 2	340.0	347.0
Antenna 3	340.0	343.0
Antenna 4	325.0	337.5
Antenna 5	305.0	308.0
Antenna 6	300.0	303.0
Antenna 7	250.0	254.0
Long Run M&R Station	Tower Height: 355 feet	
Antenna 1	345.0	349.0
Antenna 2	340.0	347.0
Antenna 3	325.0	337.5
Antenna 4	325.0	328.0
Antenna 5	315.0	318.0
Antenna 6	300.0	303.0
Antenna 7	250.0	254.0
Compressor Station 2 - Buckingham	Tower Height: 198 feet	
Antenna 1	190.0	197.0
Antenna 2	194.0	194.5
Antenna 3	190.0	194.0
Antenna 4	190.0	194.0
Antenna 5	180.0	192.5
Antenna 6	160.0	163.0
Antenna 7	130.0	135.0
Antenna 8	100.0	104.0
ACP Valve Site 18 - Wilson	Tower Height: 230 feet	
Antenna 1	222.0	226.0
Antenna 2	218.0	225.0
Antenna 3	212.0	224.5
Antenna 4	192.0	195.0
Antenna 5	190.0	194.0
Antenna 6	150.0	153.0
ACP Valve Site 19 - Upson	Tower Height: 235 feet	
Antenna 1	226.0	230.0
Antenna 2	217.0	229.5
Antenna 3	222.0	229.0
Antenna 4	196.0	200.0
Antenna 5	165.0	169.0
Antenna 6	135.0	139.0
Compressor Station 3 - Northampton	Tower Height: 295 feet	
Antenna 1	285.0	290.0
Antenna 2	275.0	287.5
Antenna 3	280.0	287.0
Antenna 4	260.0	263.0
Antenna 5	245.0	249.0
Antenna 6	230.0	234.0
Antenna 7	230.0	232.0
Antenna 8	220.0	224.0
Antenna 9	200.0	203.0
Antenna 10	190.0	191.5
Smithfield M&R Station	Tower Height: 270 feet	
Antenna 1	252.0	264.5
Antenna 2	260.0	264.0
Antenna 3	260.0	264.0
Antenna 4	257.0	264.0
Antenna 5	240.0	244.0

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Table 5-2 (continued)		
Communication Tower Antenna Height Information		
Site / Antenna	Tower Height / Antenna Height - Mounting Point Feet Above Ground Level Note 1	Antenna Height - Highest Point Feet Above Ground Level
Antenna 6	220.0	223.0
Antenna 7	200.0	204.0
Fayetteville M&R Station	Tower Height: 285 feet	
Antenna 1	276.0	280.0
Antenna 2	265.0	277.5
Antenna 3	270.0	277.0
Antenna 4	260.0	264.0
Antenna 5	246.0	249.0
Antenna 6	150.0	153.0
Antenna 7	120.0	122.0
Pembroke M&R Station	Tower Height: 350 feet	
Antenna 1	340.0	345.0
Antenna 2	338.0	345.0
Antenna 3	332.0	344.5
Antenna 4	330.0	334.0
Antenna 5	320.0	325.0
Antenna 6	300.0	303.0
Antenna 7	290.0	294.0
Antenna 8	240.0	243.0
Antenna 9	210.0	212.0
Elizabeth River M&R Station	Tower Height: 105 feet	
Antenna 1	97.0	98.5
Antenna 2	97.0	98.5
Antenna 3	80.0	92.5
Greenville M&R Station	Tower Height: 250 feet	
Antenna 1	238.0	245.0
Antenna 2	232.0	244.5
Antenna 3	240.0	243.0
Antenna 4	235.0	239.0
Antenna 5	220.0	224.0
Antenna 6	205.0	207.0

Note 1: Tower Height includes lightning rod

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Category: General

Question Number: 6 **Question Subpart:** N/A

Question:

Based on the route adjustments that were filed on January 19, 2017 and any other project design changes that have occurred since the draft EIS was issued, provide updated resource impact tables to inform our analysis of the ACP and SHP. Tables to be updated include, but are not limited to: updated RR6 table 6.4.6-1, public water supply wells (table 2.1.3-1); private water wells (table 2.1.3-2); springs (table 2.1.4-1);

Response:

Updated resource impact tables based on the route adjustments that were filed on January 19, 2017 and other Project design changes that have occurred since the draft EIS was issued are provided in Q6 Attachment 1.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

GEOLOGY

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
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Category: Geology

Question Number: 8 **Question Subpart:** N/A

Question:

In response to comments on the draft EIS (Accession Numbers 20170215-0006, 20170125-0008), verify that the mines mentioned in comments and other inactive and proposed coal mines were included in Atlantic's and DTI's previously filed data tables. If additional mines have been identified, provide a table and map(s), with mileposts, that identify inactive coal mines within construction workspaces.

Response:

Atlantic reviewed the mines identified in Accession Numbers 20170215-0006 and 20170125-0008 and concluded that 4 of the 7 mines identified in the comments are crossed by the ACP. One mine identified in the comments is located over 0.8 mile from the Project centerline; two mines identified in the comments are proposed but a permit number was not provided to verify the location of the mine.

All active and abandoned mines identified within 0.25 mile of the proposed ACP and SHP routes are identified in Table 8-1 below. In addition, the map set provided as Q8 Attachment 1 depicts each of the mining permits or limits of underground mining that are crossed by the pipeline centerline. A variety of data layers was used to prepare these maps, including:

- an underground mining layer maintained by the West Virginia Geological and Economic Survey, which contains digitized versions of current and historic underground mining extents;
- data from the Coal Bed Mapping Program, which is on-going and was last updated in May of 2015;
- a mine permit boundaries layer maintained by the West Virginia Department of Environmental Protection, which shows open and closed state mining permits; and
- an abandoned underground mining layer maintained by the Pennsylvania Department of Environmental Protection, which contains digitized current and historic underground mining extents derived from available public and private mine maps.

Atlantic will continue to coordinate with coal mine owners/operators to minimize and/or avoid coal sterilization.

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Response Provided By:

Carole McCoy
Director Engineering Services
804-775-5234

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TABLE 8-1				
Mining Operations Within 0.25 Mile of the Proposed Atlantic Coast Pipeline and Supply Header Project Pipeline Routes				
State/Mine Status	Project Facility/Milepost	Operation	Permit Number/ [Identification Number]/ (Name)	Distance and Direction From the Centerline
West Virginia				
Permit Revoked	AP-1, MP 15.5	Coal	U043300	664 feet southwest
Abandoned	AP-1, MP 15.8	Coal	[364758A]	0.0 feet
Abandoned	AP-1, MP 21.8	Coal	[905578A]	0.0 feet
Abandoned	AP-1, MP 22.9	Coal	[305248B]	0.0 feet
Permit Revoked	AP-1, MP 24.0	Coal	S003984	80 feet east
Abandoned	AP-1, MP 28.4	Coal	[906416A]	0.0 feet
Abandoned	AP-1, MP 31.3	Coal	[904226W]	0.0 feet
Abandoned	AP-1, MP 32.0	Coal	[906658A]	0.0 feet
Abandoned	AP-1, MP 33.2	Coal	[500407A]	0.0 feet
Active – Reclamation Only	AP-1, MP 35.0	Coal	U200201	937 feet northeast
Reclaimed	AP-1, MP 37.8	Coal	S009183	0.0 feet
Active	AP-1, MP 39.6	Coal	O006182	12 feet north
Reclaimed	AP-1, MP 39.6	Coal	S010882	175 feet north
Reclaimed	AP-1, MP 39.7	Coal	S005780	765 feet north
Reclaimed	AP-1, MP 40.0	Coal	S001282	64 feet northeast
Abandoned	AP-1, MP 48.7	Coal	[383339A]	0.0 feet
Abandoned	AP-1, MP 50.1	Coal	[906032A]	0.0 feet
Closed – Released	AP-1, MP 50.8	Coal	O104791	0.0 feet
Permit Revoked	AP-1, MP 50.8	Coal	S200693	0.0 feet
Abandoned	AP-1, MP 50.9	Coal	[904939A]	0.0 feet
Abandoned	AP-1, MP 51.0	Coal	[904939D]	0.0 feet
Active	AP-1, MP 51.4	Coal	O003185	0.0 feet
Closed – Released	AP-1, MP 52.1	Coal	U200387	0.0 feet
Closed – Released	AP-1, MP 52.2	Coal	S205586	0.0 feet
Not Started	AP-1, MP 52.2	Coal	U201408	0.0 feet
Abandoned	AP-1, MP 52.4	Coal	[364208A]	0.0 feet
Closed – Released	AP-1, MP 54.3	Coal	U200997	0.0 feet
Approved - Inactive	AP-1, MP 54.3	Coal	U201297	0.0 feet
Abandoned	AP-1, MP 56.2	Coal	[313336A]	0.0 feet
Permit Revoked	AP-1, MP 57.3	Coal	U009084	186 feet west
Abandoned	AP-1, MP 58.4	Coal	[341325A]	0.0 feet
Permit Revoked	AP-1, MP 59.5	Coal	O000783	283 feet northeast
Permit Revoked	AP-1, MP 59.5	Coal	U019583	290 feet northeast
Permit Revoked	AP-1, MP 59.5	Coal	H050200	0.0 feet
Permit Revoked	AP-1, MP 59.6	Coal	S201189	0.0 feet
Abandoned	AP-1, MP 60.0	Coal	[381216A]	0.0 feet
Permit Revoked	AP-1, MP 60.1	Coal	U103791	0.0 feet
Virginia				
Orphaned	AP-1, MP 107.3	Manganese	DMM16011	1234 feet northwest
Orphaned	AP-1, MP 111.3	Limestone	DMM02576	1049 feet northwest
Orphaned	AP-1, MP 113.6	Manganese	DMM031284	823 feet southeast
Orphaned	AP-1, MP 135.2	Manganese	DMM31283	607 feet west
Orphaned	AP-1, MP 140.2	Clay	DMM00252	1075 feet east
Orphaned	AP-1, MP 149.1	Shale	DMM01275	1125 feet northeast

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TABLE 8-1 (continued)

Mining Operations Within 0.25 Mile of the Proposed Atlantic Coast Pipeline and Supply Header Project Pipeline Routes				
State/Mine Status	Project Facility/Milepost	Operation	Permit Number/ [Identification Number]/ (Name)	Distance and Direction From the Centerline
Orphaned	AP-1, MP 181.9	Shale	DMM01273	1160 feet east
Orphaned	AP-1, MP 181.9	Shale	DMM01274	633 feet east
Orphaned	AP-1, MP 182.2	Limestone	DMM07300	1302 feet west
Active	AP-3, MP 11.0	Sand & Gravel	13772AA	750 feet north
Released	AP-3, MP 77.6	Sand	05827AA	16 feet north
North Carolina				
Released	AP-2, MP 46.3	Sand & Gravel	64-04	690 feet southeast
Released	AP-2, MP 46.7	Sand & Gravel	64-05	707 feet east
Released	AP-2, MP 66.2	Sand & Gravel	98-36	127 feet northeast
Released	AP-2, MP 67.4	Other/Unknown	98-19	834 feet east
Released	AP-2, MP 155.0	Sand & Gravel	26-49	1104 feet north
Active	AP-2, MP 177.6	Sand & Gravel	78-35	914 feet east
Pennsylvania				
Abandoned	TL-636, MP 0.0	Coal	(Delmont Mine)	0.0 feet
Sources:				
North Carolina Department of Environmental Quality. 2017. North Carolina Mine Inventory. Available online at https://deq.nc.gov/about/divisions/energy-mineral-land-resources/energy-mineral-land-permits/mining-program . Accessed April 2017.				
Pennsylvania Department of Environmental Protection. 2017. eMapPA Viewer. Available online at http://www.depgis.state.pa.us/emappa/ . Accessed April 2017.				
Virginia Department of Mineral Mining. 2017. Interactive GIS Map and Database. Available online at https://www.dmme.virginia.gov/webmaps/DMM/ . Accessed April 2017.				
West Virginia Department of Environmental Protection. 2017. Geographic Information Server – Data Download. Available online at https://tagis.dep.wv.gov/home/Downloads . Accessed April 2017.				
West Virginia Geological and Economic Survey. 2017. Underground and Surface Coal Mines. Available online at http://www.wvgs.wvnet.edu/GIS/CBMP/all_mining.html . Accessed April 2017.				

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Category: Geology

Question Number: 11 **Question Subpart:** N/A

Question:

The proposed route east of Valley Center Road (AP-1 MP 88.5) appears to have an abundance of karst features, caves, and sinking streams. Incorporate a route variation to avoid these features.

Response:

Atlantic has identified a possible alternate route variation between MPs 88.2 and 89.7 to avoid the Valley Center Road karst features (see Figure 11-1). The Valley Center Route Variation leaves the baseline route at MP 88.2 and travels southwest about 0.8 mile along the ridgeline of Middle Mountain. It then turns southeast and parallels the proposed route for about 1.7 miles, before rejoining the proposed route at MP 89.7. A comparison of the proposed route and the possible route variation is provided in Table 11-1.

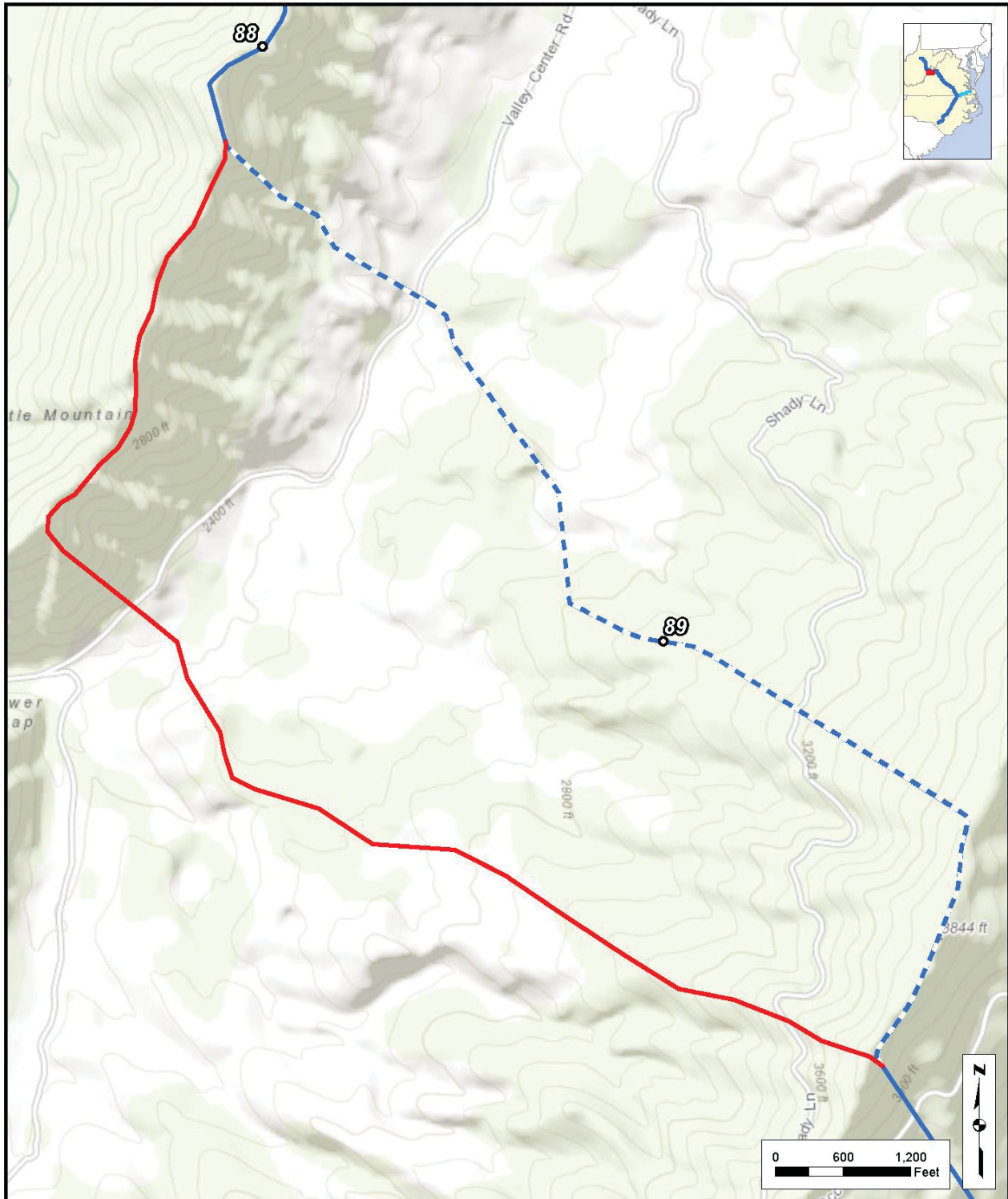
The Valley Center Route Variation is 0.3 mile longer than the baseline. It crosses one perennial waterbody, whereas the baseline route crosses no perennial waterbodies. The route variation crosses more areas of steep slope, side slope, and moderate to high landslide incidence areas than the proposed route. As shown in Table 11-1, crossings of other resources along the two routes are similar, including one road crossing and one highway crossing.

Field surveys along the proposed route did not identify any federally listed species. Access has not been obtained for surveying the possible route variation; however, similar species surveys would need to be repeated on the route variation if it is adopted. If federally listed species are found, Atlantic would need to coordinate with the FWS to determine appropriate conservation measures for these species.

Response Provided By:

Carole McCoy
Director Engineering Services
804-775-5234

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	<ul style="list-style-type: none"> Proposed Route Corresponding Segment of Proposed Route Valley Center Route Variation 	<p>Atlantic Coast Pipeline Figure 11-1 Valley Center Route Variation</p>
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TABLE 11-1			
Valley Center Route Variation for the Atlantic Coast Pipeline			
Features	Unit	Baseline Route	Valley Center Farm Route Variation
Length (total)	miles	2.2	2.5
Adjacent to existing linear corridor facilities (total)	miles	0.0	0.0
Primary U.S. or State highways crossed	number	1	1
Other State or local roads crossed	number	1	1
Property owners affected	number	6	12
Residences within 125 feet of the pipeline centerline	number	1	0
Residences within 50 feet of the pipeline centerline	number	0	0
Wetlands crossed – forested	miles	0.0	0.0
Wetlands crossed – shrub	miles	0.0	0.0
Wetlands crossed – emergent	miles	0.0	0.0
Intermittent waterbodies crossed	number	0	0
Perennial waterbodies crossed	number	0	1
Land use types crossed			
Deciduous Forest	miles	2.0	2.1
Evergreen Forest	miles	0.0	0.1
Developed, Open Space	miles	<0.1	0.1
Hay/Pasture	miles	0.2	0.3
Previously recorded cultural resources sites crossed	number	0	0
Battlefields crossed	miles	0.0	0.0
Federal lands crossed	miles	0.0	0.0
State lands crossed	miles	0.0	0.0
Recreational trails crossed	number	0	0
Scenic Byways Crossed	number	0	0
U.S. Geological Survey karst topography areas crossed	miles	0.6	0.3
NRCS Soil Survey Geographic Database (SSURGO)			
Hard shallow bedrock crossed ^a	miles	1.4	2.0
Soft shallow bedrock crossed ^b	miles	0.0	0.0
Highly erodible by water ^c	miles	2.2	2.5
Highly erodible by wind ^d	miles	0.0	0.0
Revegetation concerns ^e	miles	2.2	2.5
Length of steep slope crossed (greater than 30 percent)	miles	0.6	1.1
Length of side slope crossed (greater than 30 percent)	miles	0.2	0.3
Moderate to high landslide incidence/susceptibility lands crossed	miles	2.2	2.5
Conservation easements crossed	miles	0.0	0.0
^a	Includes soils that have bedrock within 60 inches of the soil surface. Hard bedrock refers to lithic bedrock that may require blasting or other special construction techniques during installation of the filed pipeline segments.		
^b	Includes soils that have bedrock within 60 inches of the soil surface. Soft bedrock refers to paralithic bedrock that will not likely require blasting during construction.		
^c	Includes land in capability subclasses 4E through 8E and soils with an average slope greater than or equal to 9 percent.		
^d	Includes soils with Wind Erodibility Group classification of one or two.		
^e	Includes coarse-textured soils (sandy loams and coarser) that are moderately well to excessively drained and soils with an average slope greater than or equal to 9 percent.		

WATER RESOURCES

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
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Category: Water Resources

Question Number: 15 **Question Subpart:** N/A

Question:

The updated waterbody crossing table filed on March 24 lists 93 waterbodies crossed between AP-1 MP 62.9 to 64.9, including access road waterbody crossings. Confirm 93 waterbodies are crossed within this 2-mile stretch of the project. To minimize water impacts, limit access road use in this area to that necessary to safely construct ACP.

Response:

The segment of the ACP route referred to in the Question above is located in a remote area with little access via public roads; however, there are existing private roads in the area. Atlantic is proposing use of these private roads for permanent access and has conservatively estimated a 30-foot wide limit of disturbance (LOD) along the entire length of the roads. Many of these existing roads run parallel to waterbodies, resulting in an overlap of the 30-foot-wide LOD and the edge of the waterbody in numerous locations. The waterbody crossing table over-reported each of these intersections of LOD and surveyed waterbody polygons as an impact. Atlantic has committed to protecting these waterbodies by not making road improvements that would result in stream impacts, thus reducing the 30-foot wide LOD to eliminate the over-reported intersections. The revised master waterbody table provided as Q17 Attachment 1 includes a more accurate assessment of waterbody impacts proposed at access road crossings.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

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Dated April 11, 2017

Category: Water Resources

Question Number: 17 **Question Subject:** a-m

Question:

The George Washington National Forest (GWNF) Locally Rare Species Report filed February 24, 2017 notes that ACP would cross “27 waterbodies... Twentyfive of these waterbody crossings would be affected by pipeline construction, including 13 perennial streams, 10 intermittent streams, and 2 ephemeral streams. Two of the waterbody crossings (one perennial, one ephemeral) would be affected by new permanent access roads being developed from an existing trail”. The draft Biological Evaluation (BE) filed by Atlantic on March 10, 2017 indicates that ACP would impact 30 waterbodies within the GWNF, of which two waterbodies would be affected by new permanent access roads. The revised Master Waterbody table filed on March 24, 2017 indicates that there are 25 pipeline crossings and 12 access road crossings within the GWNF. In addition... we note the following inconsistencies between recently filed tables:

- a. The crossing of Gibson Hollow (AP-1 MP 99.3), Barn Lick Branch (AP-1 MP 115.8), and UNT to Stoutameyer Branch (AP-1 MP 121.1) are missing from the Master Waterbody Crossing table included in appendix B of the draft BE.
- b. There are nine access road crossings of UNT to Muddy Run (AP-1 MP 93.7) identified in the Master Waterbody Crossing table; however, based on Unique IDs (sbaa008, sbaa009, sba010, and sba011), it appears there may only be four crossings as represented in appendix B of the draft BE.
- c. The Master Waterbody Crossing table identifies six crossings of Laurel Run (AP-1 MPs 94.1 (2 crossings), 94.2, 9.4.4, 94.5, and 94.8), and a crossing of an UNT to Laurel Run at AP-1 MP 94.2. The FERC and U.S. Forest Service (FS) have provided previous comments regarding concerns with the numerous proposed crossings of Laurel Run due to potential impacts to wild brook trout (refer to October 26, 2016 Data Request No. 23). We also note that the draft BE does not identify any access road crossings of Laurel Run.
- d. Appendix B of the draft BE identifies a permanent access road crossing of Dowell’s Draft at AP-1 MP 117.1, but it is not included in the Master Waterbody Crossing table.
- e. Two access road crossings of an UNT to Dowell’s Draft are included in the Master Waterbody Crossing table; however, based on Unique IDs (saua418), it appears there is only one crossing consistent with appendix B of the draft BE.
- f. Tables 5.3.2-1, 5.9.2-1, and 5.11.1-1 of the Applicant-Prepared BA identify the crossing method for Pig Basket Creek (AP-2 MP 47.6) as dam and pump, flume, or open cut; while the Master Waterbody Crossing table identifies the crossing

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method as open cut. Milepost locations for this crossing are also inconsistent between tables in the Applicant-Prepared BA and the Master Waterbody Crossing table.

- g. Confirm that the May 15-July 31 time of year restriction applies to Little Quankey Creek (AP-2 MP 15.7) and Neuse River (AP-2 MP 98.5); this appears to be a Virginia Department of Game and Inland Fisheries (VDGIF) time of year restriction which would not apply to these North Carolina waterbody crossings. The Master Waterbody Crossing Table identifies AP-2 MP 26.6 as a crossing of a UNT to Burnt Coat Swamp; however, tables 5.3.2-1, 5.9.2-1, and 5.11.1-1 identify this as Burnt Coat Swamp (not a tributary). Confirm the correct feature name for this crossing.
- h. The Master Waterbody Crossing Table identifies 2 crossings of UNT to Little Buffalo Creek at AP-2 MPs 79.2 and 79.3; however, the Unique ID for both crossings is the same (sjob103). Confirm that there are two crossings of this waterbody.
- i. Tables 5.3.2-1, 5.9.2-1, and 5.11.1-1 of the Applicant-Prepared BA identify a crossing of Johnson Swamp at AP-2 MP 107.6 in addition to a crossing of a UNT to Johnson Swamp at AP-2 MP 107.6; however, the Master Waterbody Crossing Table only identifies the crossing of the UNT to Johnson Swamp at AP-2 MP 107.6. Clarify if there is a crossing of both Johnson Swamp and a UNT to the swamp and which survey results apply to which crossing in the Applicant-Prepared BA.
- j. Table 5.10.2-1 of the Applicant-Prepared BA indicates a crossing of Jacks Swamp at AP-3 MP 1.9; however, this crossing is not included in the Master Waterbody Crossing table. Clarify whether ACP still crossing Jacks Swamp at this location or if the survey results provided in table 5.10.2-1 of the Applicant-Prepared BA apply to a different crossing location.
- k. The Master Waterbody Crossing Table identifies 7 waterbody crossings at AP-1 MP 85.4 of UNT to Lick Draft (2 crossings), Warwick Run (1 crossing), and Lick Draft (4 crossings); however, only 2 of these are identified as occurring within the GWNF. Verify the number of crossings and whether they are located within the GWNF boundaries.
- l. Table 5.11.1-1 of the Applicant-Prepared BA indicates that there is an access road crossing of the Cowpasture River at AP-1 MP 97.8; however, this crossing is not indicated on the Master Waterbody Crossing Table.
- m. Table 5.11.1-1 of the Applicant-Prepared BA indicates that McElroy Creek (MP 18.5) would be crossed utilizing dam and pump crossing method; however, appendix B-3 of the Applicant-Prepared BA indicates that this waterbody would

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be crossed utilizing the cofferdam method. Provide an updated Master Waterbody Crossing table for SHP.

Provide an updated waterbody crossing table that accurately addresses the inconsistencies identified above. Note that we will assume any updated waterbody table that is filed would replace waterbody crossing information presented in previously filed documents such as the draft BE and Applicant-Prepared BA.

Response:

An updated master waterbody table incorporating the route adjustments filed on January 19, 2017 and other Project design changes that have occurred since the draft EIS was issued and that resolves the discrepancies identified in this Question is provided as Q17 Attachment 1. Because the table includes location information for sensitive species, it has been filed under separate cover. The table is marked CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
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Category: Water Resources

Question Number: 18 **Question Subpart:** N/A

Question:

Identify the location and temporary and permanent impact acreage of high quality wetlands such as Atlantic white cedar and cypress gum swamps.

Response:

Atlantic evaluated wetland survey data for the ACP to identify crossings of lowland swamps dominated by Atlantic white cedar and cypress gum communities that are extensive and contiguous with larger riparian systems along the proposed pipeline routes. Table 18-1 below includes wetlands with record of cypress gum swamp communities that are associated with larger riparian systems. Wetland data collected did not indicate dominance of Atlantic white cedar in wetlands crossed by ACP.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

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TABLE 18-1

Cypress-Gum Wetlands Associated with Large Riparian Systems Crossed by the Atlantic Coast Pipeline									
Facility/State or Commonwealth/County or City	Milepost	Hydrologic Unit Code (HUC8)	Unique ID	Cowardin Classification ^a	Crossing Length (feet) ^b	Temporary Construction Impacts (acres) ^c	Operation Impacts (acres) ^d	Construction Method ^{e,f}	
AP-1 Virginia Greensville County	295.6 296.9	03010204 03010204	wgrb003f wgrb002f	PFO PFO	609 932	1.0 1.5	0.4 0.6	Open Cut Open Cut	
AP-2 North Carolina Northampton County	0.3	03010204	wmra002f	PFO	278	2.3	0.9	Open Cut	
Johnston County	101.2 106.5	03020201 03020201	wjoa012f wjoa003f	PFO PFO	944 1,411	1.6 2.5	0.7 1.0	Open Cut Open Cut	
Cumberland County	131.8	03030004	wcmb103f	PFO	1,975	3.4	1.4	Open Cut	
Robeson County	160.3 176.7	03040203 03040203	wroa002f wroh008f	PFO PFO	1,904 2,485	4.9 5.5	1.3 1.7	Open Cut Open Cut	
AP-3 Virginia Greensville County	12.3	03010204	wgrp001f	PFO	481	0.8	0.3	Open Cut	
Southampton County	31.8 32.6 32.6 38.1	03010201 03010201 03010201 03010202	wsoa020f wsoi026f wsoi021f wsoa021f	PFO PFO PFO PFO	504 113 729 638	0.8 0.1 0.8 1.1	0.3 0.1 0.5 0.4	Open Cut HDD HDD Open Cut	
City of Suffolk	38.6 56.1	03010202 02080208	wsua006f wsup032f	PFO PFO	210 1,000	0.2 1.6	0.1 0.7	HDD Open Cut	

VEGETATION, WILDLIFE, and FISHERIES

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
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Dated April 11, 2017

Category: Vegetation, Wildlife, and Fisheries

Question Number: 19 **Question Subject:** N/A

Question:

The FERC received Atlantic and DTI's updated forest fragmentation analysis submitted February 24, 2017. In this analysis, Atlantic and DTI used manual interpretation of aerial photography to delineate interior forest cores, defining small cores as less than 645 acres and large cores larger than 645 acres. In our October 26, 2016 Data Request No. 13, we requested that Atlantic and DTI use West Virginia state forest fragmentation data produced by the Natural Resource Analysis Center (NRAC) at West Virginia University, and the Virginia Department of Conservation and Recreation (VDCR) Virginia Natural Landscape Assessment (VaNLA) project to assess forest fragmentation impacts in West Virginia and Virginia. Only where these data sets did not provide coverage for the ACP and SHP area were manual interpretation to be used in the analysis. FERC requests the use of these data sets because both data sets not only delineate interior forest cores, but also assign ecological value of each core based on other attributes (e.g., landscape position, watershed drainages). Provide an updated table for Virginia and West Virginia, identifying National Forest System (NFS) lands, with the following data as requested in the October 26, 2016 data request, using the data sets requested above.

Response:

An updated forest fragmentation analysis for the ACP in West Virginia and Virginia (Tables Q19a and Q19b, respectively) and for the SHP in West Virginia (Table Q19c) using the data sets requested by FERC is provided as Q19 Attachment 1. There is no update to the forest fragmentation analysis for the ACP in North Carolina previously filed by Atlantic on February 24, 2017 (FERC Accession Number 20170224-5149). Construction of the SHP in Pennsylvania will not result in forest fragmentation.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

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Category: Vegetation, Wildlife, and Fisheries

Question Number: 20 **Question Subject:** a-f

Question:

Develop a table for Virginia and West Virginia, identifying NFS lands, with the following data for each forested interior tract:

- a. type of interior forest as defined by each data set (e.g., edge, patch, small core, medium core, large core);
- b. core forest ranking (West Virginia data set) or ecological integrity category (West Virginia data);
- c. county;
- d. enter and exit milepost;
- e. length crossed (feet); and
- f. area affected directly (interior forest cutting) and indirectly (buffer zone areas of remaining forest immediately adjacent to one or both sides of the new corridor that would no longer be classified as interior forest due to the new, project-related disturbances) for both construction and operation.

Refer to the analysis in FERC's draft EIS for the Mountain Valley Project (MVP) and Equitrans Expansion Project (EEP) sections 4.4.1.2, 4.4.2.3, 4.5.2 and tables 4.4.2-1, 4.4.2-2, as well as the FERC's draft EIS for the Mountaineer Xpress Project and Gulf Xpress Project, section 4.5.4 and table 4.5-4 for examples.

Response:

An updated forest fragmentation analysis, including the information requested in this Question, is provided as Q19 Attachment 1.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

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Category: Vegetation, Wildlife, and Fisheries

Question Number: 21 **Question Subpart:** N/A

Question:

Provide maps of interior forest cores that would be crossed by the project (small, medium, and large cores for West Virginia; ecological core areas for Virginia; small and large cores for North Carolina). Refer to the FERC's draft EIS for the MVP/EEP, figures 4.4.1-1, 4.4.1-2, and 4.4.1-3 for examples.

Response:

Maps of interior forest cores that will be crossed by the Projects are provided as Q21 Attachment 1.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
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Category: Vegetation, Wildlife, and Fisheries

Question Number: 22 **Question Subpart:** a

Question:

Regarding conservation sites, address the following:

- a. Provide an updated draft EIS table 4.4.2-1 that includes Conservation Sites and Stream Conservation Units that lists which species were identified during field surveys, and those that occur on federal lands.

Response:

An update to Table 4.4.2-1 is provided below. The table identifies Conservation Sites and Stream Conservation Units crossed by the current ACP pipeline routes, identifies those sites occurring on Federal lands, and lists species identified during field surveys at sites, where applicable.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

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TABLE 22a-1

Virginia Conservation Sites and Stream Conservation Units (SCUs) Crossed by the Atlantic Coast Pipeline

Project Segment/Site Name	Milepost	B-rank ^a	Natural Heritage Resource of Concern	Construction Impacts (acres)	Operational Impacts (acres)
AP-1 Mainline					
NFS Road Site	85.1	B3	<i>Pending agency consultation, small whorled pogonia, American ginseng, potential southern water shrew habitat</i>	5.1	1.9
Windy Cove	98.7	B2	<i>Significant karst and karst fauna</i>	95.1	34.2
Big Cedar Shale Barren ^b	101.3	B2	Central Appalachian Shale Barren (southern type), Shale Barren Rock Cross, Millboro leatherflower	0.2	<0.1
Cochrans	139.8	B4	Significant cave, underground spring, potential for cave-limited species such as Madison cave isopod and Madison cave amphipod	11.1	3.5
Campbells and Grove Farm Ponds	149.7	B2	Valley doll's daisy	12.1	4.7
Spruce Creek Tributary	162.1	B3	Central Appalachian Low-Elevation Acidic Seepage Swamp	7.1	2.6
Nottoway Basin	260.4	B2	Michaux's sumac, Roanoke Loggerch, and Atlantic pigtoe	7.2	2.6
Nottoway River – Fort Pickett SCU	260.7	B2	Dwarf wedgemussel, Yellow lance, Freshwater Mussel Concentration Area, Atlantic pigtoe , Yellow lampmussel, Green floater, Dwarf waterdog, Roanoke loggerch , Laura's clubtail, and Chowanoke crayfish	0.1	0.1
Nottoway River – Sturgeon Creek / Hardwood Creek SCU	268.8	B1	Yellow lance, Atlantic pigtoe, Yellow lampmussel, Eastern lampmussel, Roanoke loggerch, potential for Chowanoke crayfish and Roanoke loggerch at the Waqua Creek crossing	<0.1	<0.1
Emporia Power Line Bog	292.7	B5	Slender nutrush, Pine barren sandreed ^c ; Small white fringed orchid, Branched hedge-hyssop ^c , Dense-flowered camas ^c , Small bunched beaksedge ^c , Fringed meadow beauty, Slender Rattlesnake-root, Pink sundew ^{c,d} , Rafinique's seedbox ^{c,d}	4.2	2.0
Upper Fontaine Creek Habitat Zone	297.6	B5	Baldwin's spikerush; Bald Cypress – Water Tupelo Brownwater Swamp, Coastal Plain Bottomland Forest (Brownwater Low Terrace Type)	30.2	13.8
AP-3 Lateral					
Lower Fontaine Creek	12.4	B3	Reclining bulrush, Ravenfoot sedge, Lesser marsh St. John's-wort, Tidewater mucket, triangle floater, Yellow lampmussel, Eastern lampmussel	1.9	1.2
Branchville Powerline	15.6	B5	Gaping panic grass ^c , Southern bog goldenrod ^c	3.0	2.0
Handsom-Gum Powerline	27.6	B4	Small bunched beaksedge ^c , Coastal bog beaksedge, Ten-angled pipewort ^c , Dense-lowered camas ^c , Fringed meadow beauty ^c , Hairy St. John's-wort ^c , Lance-leaved rose-gentian, Northern pitcher plant, Red Milkweed ^c , Slender Nutrush, Large spreading pogonia ^c , Southern Bladderwort ^d , Tall yellow-eyed grass ^c , Pink sundew ^{c,d} , Rose pogonia ^{c,d} , Slender blue iris ^{c,d} , potential for Helicta satyr	7.8	4.7

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TABLE 22a-1 (continued)

Virginia Conservation Sites and Stream Conservation Units (SCUs) Crossed by the Atlantic Coast Pipeline

Project Segment/Site Name	Milepost	B-rank ^a	Natural Heritage Resource of Concern	Construction Impacts (acres)	Operational Impacts (acres)
Great Dismal Swamp: Northwest Section	66.0	B5	Canebrake rattlesnake, Hairy seedbox ^c , Swainson's warbler, Elliott's goldenrod, potential for Eastern big-eared bat, Southeastern myotis, Fine-lined emerald, Robust baskettail, Non-Riverine Wet Hardwood Forest (Embayed Region Type)	47.1	30.9
Great Dismal Swamp	71.4	B2	Large spreading pogonia, Elliott's goldenrod, Walter's paspalum ^c , Fringed yellow-eyed grass ^c , Tall yellow-eyed grass ^c , Hairy seedbox, Dismal Swamp Southeastern shrew, potential for Canebrake rattlesnake, Eastern big-eared bat, Southeastern myotis, Fine-lined emerald, Robust baskettail, Non-Riverine Wet Hardwood Forest (Embayed Region Type)	49.8	35.0
AP-1 Access Roads					
<i>NFS Road Site</i>					
<i>Windy Cove</i>					
Big Cedar Shale Barren ^b	101.3	B2	Central Appalachian Shale Barren (southern type), Shale Barren Rock Cross, Millboro leatherflower	<0.1	<0.1
<i>Browns Pond (GWNF)</i>					
Burnsville Cove	94.6	B1	<i>Fraser's marsh St. John's-wort</i> ^c , <i>Inflated sedge</i> , <i>Three birds orchid</i> ^c , <i>Central Appalachian Mountain Pond</i>	2.2	2.2
Spruce Creek Tributary	162.1	B3	Central Appalachian Low-Elevation Acidic Seepage Swamp	1.1	1.1
Nottoway Basin	260.4	B2	Michaux's sumac, Roanoke Loggerch , Atlantic pigtoe	0.4	0.4
Upper Fontaine Creek	297.6	B5	Baldwin's spikerush; Bald Cypress – Water Tupelo Brownwater Swamp, Coastal Plain Bottomland Forest (Brownwater Low Terrace Type)	1.5	1.5
Woods Mill Bluff	168.2	B3	Piedmont/Coastal Plain Hemlock – Hardwood Forest	0.3	0.3
AP-3 Access Roads					
Great Dismal Swamp	71.3	B2	Large spreading pogonia, Elliott's goldenrod, Walter's paspalum ^c , Fringed yellow-eyed grass ^c , Tall yellow-eyed grass ^c , Hairy seedbox, Dismal Swamp Southeastern shrew, potential for Canebrake rattlesnake, Eastern big-eared bat, Southeastern myotis, Fine-lined emerald, Robust baskettail, Non-Riverine Wet Hardwood Forest (Embayed Region Type)	4.4	2.7
Great Dismal Swamp : Northwest Section	66.0	B5	Canebrake rattlesnake, Hairy seedbox ^c , Swainson's warbler, Elliott's goldenrod, potential for Eastern big-eared bat, Southeastern myotis, Fine-lined emerald, Robust baskettail, Non-Riverine Wet Hardwood Forest (Embayed Region Type)	1.3	0.5

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TABLE 22a-1 (continued)

Virginia Conservation Sites and Stream Conservation Units (SCUs) Crossed by the Atlantic Coast Pipeline				
Project Segment/Site Name	Milepost	B-rank ^a	Natural Heritage Resource of Concern	Operational Impacts (acres)
Nottoway River – Monroe Bridge SCU	32.1	B3	Yellow lance, Yellow lampmussel, Eastern lampmussel, potential for the Eastern big-eared bat, Southeastern myotis, Fine-lined emerald, Regal darner, Robust baskettail, and Atlantic pigtoe in the Nottoway River and swamps near Sycamore Bend.	<0.1
Total				160.9

^a B-Rank Scale: B1 – Outstanding Significance; B2- Very High Significance; B3 – High Significance; B4 – Moderate Significance; B5 – Of General Biodiversity Significance.

^b The Big Cedar Shale Barren is crossed by workspace and an access road.

^c Atlantic observed these species during 2015 and 2016 field surveys (through October 22, 2016). In correspondence between Atlantic and the VDCR, tall yellow-eyed grass was not listed as a natural heritage resource of concern at the Handsome-Gum Powerline Conservation Site; Walter’s paspalum and fringed yellow-eyed grass were not listed as natural heritage resources of concern at the Great Dismal Swamp NW Section Conservation Site; walter’s paspalum was not listed as a natural heritage resource of concern at the Great Dismal Swamp Conservation Site; and pine barren sandreed was not listed as a natural heritage resource of concern at the Emporia Powerline Bog Conservation Site.

^d Pink sundew, slender blue iris, and rose pogonia are listed as a state rare “watchlist” species, which indicates the Virginia Natural Heritage is no longer tracking these resources due to the decrease in state and/or global rarity.

Note: Due to rounding, some addends may be off by 0.1.

Italics indicate conservation sites or SCUs located on NFS lands.

Bold indicates ACP survey findings.

Source: VDCR, 2016a

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Category: Vegetation, Wildlife, and Fisheries

Question Number: 22 **Question Subpart:** b

Question:

Regarding conservation sites, address the following:

- b. In Atlantic's comments on the draft EIS, item 43 states several conservation sites, including the Lyndhurst Conservation Site, have been avoided by reroutes and are no longer within or adjacent to the ACP area. Based on Atlantic's October 26, 2016 response to a request for an updated list of unique, sensitive, and protected vegetation communities crossed, the Lyndhurst Conservation Site at AP-1 MP 149.4 was not included. However, current GIS route data shows the ACP may still cross the Lyndhurst Conservation Site. Verify if the Lyndhurst Conservation Site would be affected by construction or operation of the project.

Response:

Updated resource impact tables are provided as Q6 Attachment 1. The updated tables are based on the route adjustments that were filed on January 19, 2017 and other Project design changes that have occurred since the draft EIS was issued. The updated resource impact tables include information on crossings of Conservation Sites identified by the Virginia Natural Heritage Program along the proposed pipeline routes and in other work areas.

Based on the current Project design, the ACP, including the centerline, workspace, and access roads, does not cross the Lyndhurst Conservation Site. The site is located approximately 0.2 mile northeast of MP 151.6.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

SPECIAL STATUS SPECIES

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
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Dated April 11, 2017

Category: Special Status Species

Question Number: 28 **Question Subpart:** a

Question:

The following inconsistencies regarding survey completion have been noted:

- a. Based on table 5.10.2-1 of the Applicant-Prepared BA, Little Quankey Creek (AP-2 MP 15.7) and Jacks Swamp (AP-3 MPs 0.6 and 1.9) were considered unsuitable habitat at the time of the survey due to low water levels; confirm if additional surveys are to be conducted at these waterbody locations and provide survey results.

Response:

The FWS North Carolina Raleigh Field Office provided a letter dated November 16, 2016 that concurred with the results of the field surveys. This letter provided a list of 24 waterbodies where no additional survey efforts are necessary, which included Little Quankey Creek and Jacks Swamp 1 and 2 (FERC Accession Number 20170110-5142). Both Little Quankey Creek and Jacks Swamp 1 and 2 are planned for fish and other aquatic taxa collection and relocation at the time of construction as recommended by the North Carolina Wildlife Resources Commission.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
Response to Data Request
Dated April 11, 2017

Category: Special Status Species

Question Number: 28 **Question Subpart:** b

Question:

The following inconsistencies regarding survey completion have been noted:

- b. Based on the Master Waterbody Crossing Table, there are 2 crossings of Little Quankey Creek (AP-2 MPs 15.3 and 15.7); based on the unique ID and survey results provided in the Applicant-Prepared BA, it appears that only the MP 15.7 crossing location has been surveyed. Based on the potential for Endangered Species Act (ESA)-listed species to occur at MP 15.3, confirm if Atlantic has or will conduct surveys at this crossing location and provide survey results.

Response:

There is only one Project crossing of Little Quankey Creek, at AP-2 MP 15.3 (unique ID nhd_nc_n_003). Surveys at this location were performed in July 2016 and February 2017. The wetland/waterbody complex located at AP-2 MP 15.7 (wetland ID whlf009f_w) was incorrectly identified on a previous table as an additional crossing of Little Quankey Creek. An updated master waterbody table including corrected data for the crossing of Little Quankey Creek is provided as Q17 Attachment 1.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
Response to Data Request
Dated April 11, 2017

Category: Special Status Species

Question Number: 28 **Question Subpart:** c

Question:

The following inconsistencies regarding survey completion have been noted:

- c. Tables 5.3.2-1, 5.9.2-1, and 5.11.1-1 of the Applicant-Prepared BA provide survey results for UNT to Little Sapony Creek (AP-2 MP 53.3), Little Sapony Creek (AP-2 MP 54.0), and Sapony Creek (AP-2 56.3); however, the Master Waterbody Crossing table indicates that mussel, Neuse River waterdog, Carolina madtom, and North Carolina spiny crayfish surveys are pending at these locations.

Response:

Little Sapony Creek (AP-2 MP 54.0) is complete for survey. Additional mussel/Carolina madtom survey is pending for UNT to Little Sapony Creek (AP-2 MP 53.3) and Sapony Creek (AP-2 56.3). Mussel and Carolina madtom habitat assessments were performed at UNT to Little Sapony Creek and Little Sapony Cree in January 2017 with poor to moderate habitat observed; however, additional work is pending at UNT to Little Sapony Creek due to prior survey window access restrictions.

Neuse River waterdog surveys were completed at the Little Sapony Creek and Sapony Creek crossings in January 2016 and at the UNT to Little Sapony Creek crossings in January 2017 with negative results for all three locations. Survey results are discussed in Atlantic's Neuse River waterdog survey report, which was filed on May 5, 2017 (FERC Accession Number 20170505-5037).

Supplemental crayfish trapping was completed at the Little Sapony Creek, Sapony Creek, and UNT to Little Sapony Creek crossings in February 2017. No target crayfish species were observed during the survey. Atlantic anticipates filing an updated North Carolina spiny crayfish report, including the survey results for these crossings, in May 2017.

An updated master waterbody table including the survey results discussed in this response is provided as Q17 Attachment 1.

All remaining surveys are anticipated to occur prior to construction and upon receipt of landowner permission to access sites. Atlantic and DTI will provide additional survey results upon completion in 2017.

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Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
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Dated April 11, 2017

Category: Special Status Species

Question Number: 28 **Question Subpart:** d

Question:

The following inconsistencies regarding survey completion have been noted:

- d. The Applicant-Prepared BA tables 5.9.2-1 and 5.11.1-1 identify two crossings of Flat Rock Branch 1 and 2 with survey results for Carolina madtom and mussels, respectively, at MPs 43.7 and 44.5. Table 5.3.2-1 identifies Flat Rock Branch 1 and 2 with Neuse River waterdog survey results at MPs 44.5 and 44.8. The Master Waterbody Crossing Table (3/24/17 version) identifies three crossings of Flat Branch at MPs 43.7, 44.4, and 44.8, but does not indicate that the crossing at MP 44.8 has been surveyed. Confirm which surveys results apply to which crossing locations; and/or if surveys are pending at any of these crossing locations.

Response:

Flat Rock Branch 1 and 2 at MPs 43.7 and 44.5, respectively, were surveyed. The crossing at MP 44.8 is a first order stream; therefore, it did not meet agency requirements for survey (second order streams or greater). An updated master waterbody table correcting the inconsistencies noted in this Question is provided as Q17 Attachment 1.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
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Dated April 11, 2017

Category: Special Status Species

Question Number: 28 **Question Subpart:** e

Question:

The following inconsistencies regarding survey completion have been noted:

- e. Based on the Master Waterbody Crossing, there appears to be 2 crossings of Toisnot Swamp (AP-2 MP 62.8 and MP 62.9). Due to the potential for ESA-listed species within this waterbody, confirm that Atlantic has or intends to survey the MP 62.9 crossing location and provide the results of these surveys.

Response:

The perennial crossing of Toisnot Swamp is surrounded on either side by large swampy areas. These areas were recorded as two open water/pond features by Atlantic's wetland/waterbody crew, who could not safely reach the perennial crossing of Toisnot Swamp between MP 62.8 and 62.9. The perennial waterbody crossing of Toisnot Swamp is an ISD-designated crossing (isdna001) at MP 62.83 between the two "ponds." The main waterbody location at MP 62.83 was surveyed by the aquatics crew. There is no separate perennial crossing at MP 62.9 that requires survey, as this location is just the southern edge of the swamp overflow from the perennial crossing. An updated master waterbody table correcting the inconsistencies noted in this Question is provided as Q17 Attachment 1.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
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Dated April 11, 2017

Category: Special Status Species

Question Number: 28 **Question Subpart:** f

Question:

The following inconsistencies regarding survey completion have been noted:

- f. Tables 5.3.2-1 of the Applicant-Prepared BA provide survey results for the Neuse River waterdog for Beaverdam Swamp (AP-2 MP 23.1), and Marsh Swamp (AP-2 MP 69.7); however, the Master Waterbody Table indicates that the Neuse River waterdog surveys are pending. In addition, table 5.11.1-1 of the Applicant-Prepared BA indicate that survey results are pending for mussels for Marsh Swamp (AP-2 MP 69.7); however, the Master Waterbody Crossing table indicate mussel surveys are complete at this location.

Response:

Mussel/target aquatics and Neuse River waterdog surveys are complete for Marsh Swamp, but Beaverdam Swamp still requires mussel/target species surveys. Partial Neuse River waterdog surveys were performed at Beaverdam Swamp in January and February 2016; however, additional survey will be required due to restricted access for a parcel within the survey reach. An updated master waterbody table correcting the inconsistencies noted in this Question is provided as Q17 Attachment 1.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
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Dated April 11, 2017

Category: Special Status Species

Question Number: 28 **Question Subpart:** g

Question:

The following inconsistencies regarding survey completion have been noted:

- g. Based on the Waterbody Crossing Table, there are four crossing of perennial UNT to Marsh Swamp at AP-2 MPs 70.4, 70.5, 70.9, and 71.0; however, only one of these locations appears to have been surveyed (MP 71.0). Due to the potential for ESA-listed species at these waterbody crossings, and suitable habitat for Neuse River waterdog identified at MP 71.0, confirm whether Atlantic has or will conduct surveys at MPs 70.4, 70.5 and 70.9 waterbody crossings. In addition, tables 5.9.2-1 and 5.11.1-1 of the Applicant-Prepared BA provide survey results for the MP 71.0 crossing location, but table 5.3.2-1 provides survey results for the MP 70.9 crossing. Confirm if survey results provided in table 5.3.2-1 should actually apply to the MP 71.0 crossing.

Response:

Only the Marsh Swamp crossing at MP 71.0 met agency requirements for survey. A northern crossing of Marsh Swamp at MP 69.7 was added for survey by the North Carolina Wildlife Resources Commission in a May 2016 letter, although it was not previously identified for survey because it did not meet stream order requirements. An updated master waterbody table correcting the inconsistencies noted in this Question is provided as Q17 Attachment 1.

Based on agency feedback for stream survey requirements, Atlantic does not plan to survey the three additional unnamed tributaries located between the two surveyed crossings, i.e., the tributaries at MPs 70.4, 70.5, and 70.9, as these crossings do not meet second order thresholds for survey.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
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Dated April 11, 2017

Category: Special Status Species

Question Number: 28 **Question Subpart:** h

Question:

The following inconsistencies regarding survey completion have been noted:

- h. Tables 5.3.2-1 of the Applicant-Prepared BA provides survey results for Carolina madtom at UNT to Johnson Swamp at AP-2 MP 107.6; however, the Master Waterbody Crossing Table indicates that survey results are pending for this species.

Response:

Survey for Carolina madtom is complete at UNT to Johnson Swamp at MP 107.6. An updated master waterbody table correcting the inconsistencies noted in this Question is provided as Q17 Attachment 1.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
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Category: Special Status Species

Question Number: 28 **Question Subpart:** i

Question:

The following inconsistencies regarding survey completion have been noted:

- i. Tables 5.9.2-1 and 5.11.1-1 of the Applicant-Prepared BA indicate additional surveys are pending at Parker Pond Swamp / John K Swamp at AP-2 MP 110.6; however, the Master Waterbody Crossing table does not indicate potential for ESA-listed species, nor pending surveys. In addition, Parker Pond Swamp is not identified in the Master Waterbody Crossing Table.

Response:

Parker Pond Swamp/John K. Swamp at AP-2 MP 110.6 is an ISD-designated waterbody (Feature ID isdjo009) surveyed by the wetland/waterbody crew as a wetland (wjop029f_w) due to their inability to safely reach the perennial crossing portion of the swamp. As a result, it was not initially tagged for inclusion in the master waterbody table. This ISD-designated waterbody and other T&E waterbodies falling within this category are included in the updated master waterbody table provided as Q17 Attachment 1. Additional surveys are scheduled for this crossing in 2017.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
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Category: Special Status Species

Question Number: 28 **Question Subpart:** j

Question:

The following inconsistencies regarding survey completion have been noted:

- j. Per the Master Waterbody Crossing Table, there are two crossing locations of Mayo Creek, perennial tributary of the James River, at AP-1 MP 181.9 and MP 184.5. Per table 5.11.1-1, due to the potential presence of the green floater, mussel surveys will be conducted at AP-1 MP 184.5. Confirm that mussel surveys will also occur at the MP 181.9 crossing location.

Response:

In an e-mail dated March 28, 2017, the FWS noted the potential presence of green floater for the Mayo Creek crossing at MP 184.5. Although the second crossing at MP 181.9 was not specified in the e-mail correspondence, both crossings will be surveyed in 2017.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
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Category: Special Status Species

Question Number: 29 **Question Subpart:** a-c

Question:

Provide an updated species survey status table that addresses the inconsistencies identified above and describes survey status as follows:

- a. miles, acres, or other pertinent unit of measurement of pending surveys by county and state and by species or resource;
- b. the percentage of these surveys that have not been completed due to denied landowner access; and
- c. the anticipated completion date for pending surveys.

Response:

Table 29-1 below includes the remaining acreage or site count and anticipated completion date for pending species surveys for the ACP and SHP. The estimated percent remaining due to denied landowner access is also incorporated into Table 29-1. Where readily available, these estimates were based on survey permission denials reported by surveyors for their respective surveys. For the remaining survey areas, inaccessible areas were estimated using Project tract permission status.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

**Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
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TABLE 29-1

Project/State/ County		Species or Species Category	Survey Type	Survey Remaining	Estimated Percent Remaining Due to Denied Access ^d	Anticipated Completion Date
Atlantic Coast Pipeline						
West Virginia						
Harrison	Bats	Roost Tree Mapping Survey	0.3 acres	100%	October 2017	
	Plants	Habitat and/or Occupancy Surveys	0.6 acres	0%	July 2017	
Lewis	Bats	Acoustic Survey ^b	4 sites	0%	June 2017	
	Plants	Habitat and/or Occupancy Surveys	20.3 acres	1%	July 2017	
Upshur	Bats	Acoustic Survey ^b	7 sites	0%	June 2017	
		Hibernacula Site Survey (Phase 1) ^a	7 sites	100%	October 2017	
Randolph	Plants	Habitat and/or Occupancy Surveys	9.2 acres	0%	July 2017	
	Bats	Acoustic Survey ^b	18 sites	22%	June 2017	
		Hibernacula Pedestrian Survey	60.7 acres	100%	October 2017	
		Hibernacula Site Survey (Phase 1) ^a	10 sites	100%	October 2017	
		Hibernacula Site Survey (Phase 2)	6 sites	17%	October 2017	
Pocahontas	Plants	Roost Tree Mapping Survey	80.3 acres	100%	October 2017	
	Bats	Habitat and/or Occupancy Surveys	279.5 acres	2%	July 2017	
		Acoustic Survey ^b	11 sites	36%	June 2017	
		Hibernacula Pedestrian Survey	149.4 acres	100%	October 2017	
		Hibernacula Site Survey (Phase 1) ^a	31 sites	100%	October 2017	
		Hibernacula Site Survey (Phase 2)	17 sites	24%	October 2017	
		Mist Netting Survey	9 sites	33%	June 2017	
		Roost Tree Mapping Survey	11.8 acres	100%	October 2017	
	Plants	Habitat and/or Occupancy Surveys	253.7 acres	0%	July 2017	
	Timber Rattlesnake	Habitat and Occupancy Survey	0.2 acres	0%	May 2017	
Virginia						
Highland	Bats	Acoustic Survey ^b	3 sites	100%	June 2017	
		Hibernacula Site Survey (Phase 1) ^a	1 site	100%	October 2017	
	GWNF RFSS Insects	Habitat Assessment	5.0 acres	0%	June 2017	
	Mussels	Habitat Assessment	1 site	100%	July 2017	
	Plants	Habitat and/or Occupancy Surveys	0.4 acres	0%	October 2017	
	Tiger Salamander	Habitat Assessment ^c	140.4 acres	0%	May 2017	
	Bats	Acoustic Survey ^b	25 sites	68%	June 2017	
Bath	GWNF RFSS Insects	Habitat Assessment	60.4 acres	0%	June 2017	
	Mussels	Habitat Assessment	2 sites	0%	July 2017	
		Occupancy Surveys	2 sites	50%	July 2017	
	Plants	Habitat and/or Occupancy Surveys	110.3 acres	48%	October 2017	
	Small Mammals	Habitat Assessment	43.0 acres	81%	June 2017	
	Tiger Salamander	Habitat Assessment ^c	206.4 acres	61%	May 2017	

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TABLE 29-1 (continued)

Survey Remaining on the Atlantic Coast Pipeline and Supply Header Pipeline Projects				Estimated Percent Remaining Due to Denied Access ^d	Anticipated Completion Date	
Project/State/ County	Species or Species Category	Survey Type ^b	Survey Remaining			
Augusta	Bats	Acoustic Survey ^b	12 sites	25%	June 2017	
	GWNF RFSS Insects	Habitat Assessment	25.1 acres	0%	June 2017	
		Mussels	Habitat Assessment	4 sites	100%	July 2017
	Plants	Occupancy Surveys	1 site	100%	July 2017	
		Small Mammals	Habitat and/or Occupancy Surveys	145.8 acres	28%	October 2017
			Tiger Salamander	Habitat Assessment	0.3 acres	7%
	Nelson	Bats	Habitat Assessment ^c	257.9 acres	0%	May 2017
			Year 2 of Trapping Survey	1 site	0%	May 2017
		Mussels	Acoustic Survey ^b	15 sites	100%	June 2017
			Plants	Occupancy Surveys	3 sites	100%
Bats		Habitat and/or Occupancy Surveys	7.7 acres	91%	October 2017	
		Mussels	Acoustic Survey ^b	1 site	0%	June 2017
Buckingham		Plants	Occupancy Surveys	1 site	100%	July 2017
		Mussels	Habitat and/or Occupancy Surveys	68.8 acres	0%	October 2017
Prince Edward Nottoway		Plants	Habitat and/or Occupancy Surveys (blank)	1 site	100%	July 2017
		Mussels	Occupancy Surveys	1 site	0%	July 2017
Dinwiddie	Mussels	Occupancy Surveys	3 sites	67%	July 2017	
	Plants	Habitat and/or Occupancy Surveys	0.3 acres	100%	October 2017	
Brunswick	Roanoke Logperch	Habitat Assessment	1 site	100%	June 2017	
	Bats	Acoustic Survey ^b	1 site	100%	June 2017	
Greensville	Plants	Habitat and/or Occupancy Surveys	35.3 acres	0%	October 2017	
	Mussels	Occupancy Surveys	2 sites	50%	July 2017	
Southampton	Plants	Habitat and/or Occupancy Surveys	7.5 acres	0%	October 2017	
	Bats	Mist Netting Survey	1 site	100%	June 2017	
City of Suffolk	Mussels	Occupancy Surveys	2 sites	50%	July 2017	
	Plants	Habitat and/or Occupancy Surveys	0.2 acres	0%	October 2017	
Cumberland	Bats	Acoustic Survey ^b	7 sites	100%	June 2017	
	Plants	Habitat Assessment ^c	37.6 acres	78%	June 2017	
Chesapeake	Mussels	Year 2 of Trapping Survey	2 sites	0%	June 2017	
	Plants	Habitat Assessment	2 sites	100%	July 2017	
North Carolina Halifax	Bats	Occupancy Surveys	1 site	100%	July 2017	
	Plants	Habitat and/or Occupancy Surveys	142.2 acres	3%	October 2017	
North Carolina Halifax	Carolina Madtom	Acoustic Survey ^b	2 sites	0%	June 2017	
	Chowanoke Crayfish	Habitat and/or Occupancy Surveys	54.4 acres	9%	October 2017	
Mussels	Carolina Madtom	Habitat and/or Occupancy Surveys	1 site	100%	July 2017	
	Chowanoke Crayfish	Habitat and/or Occupancy Surveys	1 site	100%	July 2017	
Mussels	Occupancy Surveys	Occupancy Surveys	2 sites	100%	July 2017	

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TABLE 29-1 (continued)

Survey Remaining on the Atlantic Coast Pipeline and Supply Header Pipeline Projects

Project/State/ County	Species or Species Category	Survey Type	Survey Remaining	Estimated Percent Remaining Due to Denied Access^d	Anticipated Completion Date
	Neuse River Waterdog	Occupancy Surveys	2 sites	50%	Prior to Construction
Nash	Carolina Madtom Mussels Plants	Habitat and/or Occupancy Surveys Occupancy Surveys Habitat and/or Occupancy Surveys	1 site 2 sites 10.5 acres	0% 50% 73%	July 2017 July 2017 June 2017
Wilson	Neuse River Waterdog	Occupancy Surveys	1 site	100%	Prior to Construction
Johnston	Plants Bats	Habitat and/or Occupancy Surveys Acoustic Survey ^b	4.8 acres 1 site	0% 0%	June 2017 June 2017
	Carolina Madtom Mussels	Habitat and/or Occupancy Surveys Occupancy Surveys	3 sites 4 sites	67% 50%	July 2017 July 2017
	North Carolina Spiny Crayfish Plants Bats	Habitat and/or Occupancy Surveys Habitat and/or Occupancy Surveys Acoustic Survey ^b	3 sites 10.8 acres 7 sites	67% 48% 57%	July 2017 June 2017 June 2017
Cumberland	Plants	Mist Netting Survey	1 site	100%	June 2017
Robeson	Plants	Habitat and/or Occupancy Surveys	36.8 acres	42%	June 2017
	Plants	Habitat and/or Occupancy Surveys	11.6 acres	0%	June 2017
Supply Header Project					
West Virginia					
Doddridge	Bats	Hibernacula Site Survey (Phase 1) ^a Roost Tree Mapping Survey	2 sites 3.0 acres	100% 100%	October 2017 October 2017
	Plants Bats	Habitat and/or Occupancy Surveys Acoustic Survey ^b	43.5 acres 2 sites	80% 50%	July 2017 June 2017
Wetzel	Plants	Habitat and/or Occupancy Surveys	3.6 acres	0%	July 2017
^a May also need Phase 2 survey, pending the results of Phase 1 surveys. ^b May also need mist netting survey surveys, pending the results of acoustic surveys. ^c May also need presence/absence survey, pending the results of habitat surveys. ^d Acreage estimates for some surveys were estimated using project tract permissions data. These data under-estimate denied access and do not represent land owner interactions at the time survey access was requested.					

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Category: Special Status Species

Question Number: 31 **Question Subpart:** a-b

Question:

Provide an updated table that addresses federally-listed bat surveys on NFS lands as follows:

- a. miles, acres, or other pertinent unit of measurement of pending surveys by survey type for both the MNF and GWNF;
- b. results of all previous federally-listed bat surveys by survey type for both the MNF and GWNF.

Response:

Shapefiles identifying the remaining bat survey areas on NFS lands were provided to the MNF and GWNF on May 2, 2017 (Q31 Attachment 1). At present, remaining surveys include 6 mist netting sites in the MNF and 8 acoustic sites in GWNF as shown below in Table 31-1. A summary of bat survey results for surveys completed through April 28, 2017 is provided in Table 31-2 below.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

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Table 31 – 1				
Survey Remaining in the Monongahela and George Washington National Forests				
Bat Survey Method	Bat Survey Type	Remaining Survey (as of April 27, 2017)	Anticipated Survey Completion Date	
Monongahela National Forest				
Presence/Probable	Acoustic Survey	None	June 16, 2017	
Absence	Mist Netting Survey	6 sites	June 16, 2017	
Habitat Assessment	Potential Roost Tree Mapping	None	Not applicable	
	Pedestrian Hibernacula Survey	None	Not applicable	
	Hibernacula Site Survey	None	Not applicable	
	Eastern Small-footed Bat Roost Survey	None	Not applicable	
George Washington National Forest				
Presence/Probable	Acoustic Survey	8 sites	June 16, 2017	
Absence	Mist Netting Survey	Pending results of acoustic survey	June 16, 2017	
Habitat Assessment	Hibernacula Site Survey	None	Not applicable	

Table 31 – 2				
Survey Results in the Monongahela and George Washington National Forests ^a				
Bat Survey Category	Bat Survey Type	2015 Result Details ^b	2016 Result Details ^b	2017 Result Details ^a
Monongahela National Forest				
Presence/Probable	Acoustic Survey	2 sites surveyed: No federal species detected	None	None
Absence	Mist Netting Survey	25 sites surveyed: 5 MYSE captured at 4 sites	7 sites surveyed: No protected species captured	Pending 2017 survey
Habitat Assessment	Potential Roost Trees Survey	137 potential roost trees identified	9 potential roost trees identified	2,567 potential roost trees identified
	Hibernacula Site Survey	No suitable hibernacula found. Phase 1 surveys conducted at 1 unsuitable site.	No suitable hibernacula found. Phase 1 surveys conducted at 3 unsuitable sites.	No suitable hibernacula found. Phase 1 surveys conducted at 2 unsuitable sites.
	Eastern Small-footed Bat Roost Survey	5 potential roosts evaluated and found unsuitable.	3 potential roosts evaluated; 2 were found suitable.	12 potential roosts evaluated; 3 were found suitable.
George Washington National Forest				
Presence/Probable	Acoustic Survey	20 sites surveyed: MYSO detected at 2 sites, MYSE detected at 3 sites, COTO detected at 1 site	13 sites surveyed: No federal species detections	Pending 2017 survey
Absence	Mist Netting Survey	None	1 site surveyed: No protected species captured.	Pending 2017 survey
Habitat Assessment	Hibernacula Site Survey	None	None	Phase 1 surveys conducted at 3 sites, all unsuitable
^a Survey results as of April 28, 2017. ^b Survey results include findings on previous ACP routes.				

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Category: Special Status Species

Question Number: 33 **Question Subpart:** a-d

Question:

The following species occur or have the potential to occur in the counties crossed by ACP or SHP according to FWS IPaC; some of these species have been introduced based on the location of proposed communication towers. Provide correspondence with the appropriate FWS Field Office that these species do not require further consideration, and the rationale (e.g., no suitable habitat in project area), or if applicable, provide species account, impact analysis, and conservation measures that would be implemented to avoid or mitigate impacts on the species.

- a. Diamond darter (*Crystallaria cincotta*) (Randolph and Pocahontas, West Virginia);
- b. Sensitive joint-vetch (*Aeschynomene virginica*) (Prince George, Virginia);
- c. Smooth coneflower (*Echinacea laevigata*) (Bath, Virginia); and
- d. Canby's dropwort (*Oxypolis canbyi*) (Scotland, North Carolina).

Response:

As indicated in the response to Question 5, 11 non-leased tower sites are proposed to support ACP and SHP operations. These tower locations will be located within the limits of disturbance of other facilities currently proposed for the ACP and SHP. Other proposed communication sites will include the addition of new equipment on existing, previously permitted towers and would not require any additional land disturbance. Therefore, Section 7 impacts will only be assessed for the 11 non-leased tower sites, the impacts of which are discussed in the current Biological Assessment. Based on the biological study plans submitted to and approved by the FWS these species do not have potential to occur in the limits of disturbance of the facilities currently proposed, including the 11 non-leased tower sites. The FWS has reviewed the current draft Biological Assessment and has not requested that Atlantic add diamond darter, sensitive joint-vetch, smooth coneflower, and Canby's dropwort to the impact analysis. According to prior consultation with the FWS, these species do not have potential to occur within the Project footprint of the 11 tower sites. Please refer to the response to Question 5 for further details on the non-leased tower sites.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
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Category: Special Status Species

Question Number: 34 **Question Subpart:** N/A

Question:

Provide the results of desktop analysis and/or resource surveys for ESA-listed or under review species that may occur according to FWS IPaC data or agency consultation at the communication towers sites where tree clearing and/or ground disturbing activities are proposed.

Response:

As identified in the response to Question 5, 11 non-leased tower sites are proposed to support ACP and SHP operations. These tower locations will be located within the limits of disturbance of other facilities currently proposed for the ACP and SHP. Other proposed communication sites will include the addition of new equipment on existing, previously permitted towers and would not require any additional land disturbance. Therefore, Section 7 impacts will only be assessed for the 11 non-leased tower sites, the impacts of which are discussed in the current Biological Assessment. Please refer to the response to Question 5 for further details on non-leased tower sites.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
Response to Data Request
Dated April 11, 2017

Category: Special Status Species

Question Number: 44 **Question Subpart:** N/A

Question:

As requested in the October 26, 2016 environmental information request, Data Request No. 24.e, provide the acreage of Indiana bat suitable habitat that would be cleared by construction and operation of ACP and SHP.

Response:

Suitable habitat for Indiana bat is defined as any forested habitat areas in counties listed by the FWS where Indiana bat has the potential to occur, without regard for whether the species is present. Approximately 2,674 acres of suitable habitat for the Indiana bat is within the Project workspace for the ACP and approximately 478 acres of suitable habitat for the Indiana bat is within the Project workspace for the SHP. Field surveys have been conducted to determine what portion of that suitable habitat is actually occupied.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
Response to Data Request
Dated April 11, 2017

Category: Special Status Species

Question Number: 45 **Question Subpart:** N/A

Question:

Based on recent correspondence with FWS, there is concern that the increased use of access roads near bat hibernacula (both noise emissions and vibrations) could adversely impact hibernating bats. To better understand this potential, provide a description of the current average traffic levels at the access roads located within 0.5 mile of known and survey identified bat hibernacula relative to the average expected trips (where a trip is up and back) per day or week during construction and operation. Confirm whether the access roads within 0.5 mile of known and survey identified bat hibernacula are upgradient or downgradient of the proposed access roads.

Response:

Atlantic has proposed five access roads located within 0.5 mile of known or survey identified bat hibernacula. Table 45-1 identifies the current average daily traffic (ADT) levels for these roads, estimated based on field observations, and the hibernacula location relative to the road. The proposed ADT for the Projects is based on the typical construction sequence (e.g., clearing, grading, welding, and restoration) and is defined as the total traffic volume during the construction phase divided by the number of days of construction. Construction schedule for these locations is conservatively assumed to be eight months, March through October, and assumes a peak number of vehicles on each access road during a given period. ADT during operations will be less than one vehicle per day (VPD).

Response Provided By:

Carole McCoy
 Director of Engineering Services
 804-775-5234

TABLE 45-1			
Access Roads within 0.5 mile of Known Hibernacula			
Access Road ID	Current ADT (VPD)	Proposed ADT (VPD)	Hibernacula Location
04-002-B025.AR3	<1	7	Upgradient
04-002-B080.AR1	<1	12	Upgradient
04-002-B082.AR1	<1	10	Downgradient
05-001-B012.AR1	<1	8	Downgradient
05-001-C013.AR2	<1	7	Upgradient

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Response to Data Request
Dated April 11, 2017

Category: Special Status Species

Question Number: 58 **Question Subpart:** N/A

Question:

The January 27, 2017 Applicant-Prepared BA indicates that 56 karst features were delineated in Augusta County within the survey corridor within the Madison Cave isopod priority area/suitable habitat (MPs 123.7 to 149.6) (page 184); however, table 5.12.2-1 only identifies 55 features. Resolve this discrepancy.

Response:

Table 5.12.2-1 correctly identified the number of karst features delineated in Augusta County within the Madison Cave isopod priority area/suitable habitat. An updated version of Table 5.12.2-1, including the direction of the karst feature relative to the workspace or access road, is provided as Q62 Attachment 1.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
Response to Data Request
Dated April 11, 2017

Category: Special Status Species

Question Number: 59 **Question Subpart:** N/A

Question:

The FWS Virginia Field Office indicated that they provided Atlantic with a list of sensitive karst features on December 7, 2016 (K. Smith to Thronson email). Provide an updated table 5.12.2-1 of the Applicant-Prepared BA that includes these sensitive karst features.

Response:

Features listed by the FWS Virginia Field Office in the referenced correspondence were included in the karst table in the Applicant-Prepared BA field on January 27, 2017. The following features were not determined to have potential for Madison Cave isopod based on field survey information:

- A131-1: Feature is in an active cornfield.
- A106-1: Closed feature in a farm field.
- A162-1: Feature is in a cornfield and filled with construction debris.
- A162-3: Feature is in a farm field and full of farm waste.
- A148-1: Closed feature in a pasture.
- A148-2: Closed feature in a pasture.

Atlantic will continue to consult with the FWS and will respond to their questions and requests directly and/or with filing supplemental information to the BA, as needed.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
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Dated April 11, 2017

Category: Special Status Species

Question Number: 62 **Question Subpart:** N/A

Question:

Revise table 5.12.2-1 of the Applicant-Prepared BA to include the direction of the karst feature relative to the workspace or access road.

Response:

An updated table of sensitive karst features including the direction of the karst feature relative to the workspace or access road is provided as Q62 Attachment 1.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
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Category: Special Status Species

Question Number: 64 **Question Subpart:** a-h

Question:

Based on correspondence with the FWS, mussels should be assumed at the following waterbodies and all perennial tributaries within 1 mile upstream and downstream of these waterbodies, based on documented occurrences of these species. Update the Applicant-Prepared BA and corresponding waterbody tables accordingly.

- a. Dwarf wedgemussel: Nottoway River (both crossings), Virginia; and Rocky Swamp, Little River, North Carolina (not Little Creek, North Carolina);
- b. Clubshell: Hacker's Creek, West Virginia (not McElroy Creek, West Virginia);
- c. James spiny mussel: Cowpasture River, Mill Creek, Virginia (not Cape Fear River, North Carolina);
- d. Snuffbox: McElroy Creek, West Fork River, West Virginia;
- e. Tar River spiny mussel: Fishing Creek, Swift Creek, Little River, Tar River, North Carolina;
- f. Yellow lance: Nottoway River (both crossings), Virginia; and Swift Creek, Tar River, Little River, and Fishing Creek, North Carolina (not the Neuse River);
- g. Atlantic pigtoe: Nottoway River (AP-3 MP 32.6), Appomattox River, Mill Creek, Virginia; and Roanoke River, Little River, Cape Fear River, North Carolina (not the Neuse River); and
- h. Green floater: Greenbrier River, West Virginia; James River, Mayo Creek, UNT tributaries to the James River (MPs 184.9 and 185.4) Meherrin River (both crossings), Virginia; and Roanoke River, Swift Creek, Tar River, and Neuse River, North Carolina.

Response:

Atlantic and DTI continue to consult with the FWS regarding the need to assume presence of species that were not found during Project surveys and the need to include perennial tributaries within one mile as ESA sensitive waterbodies.

**Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
Response to Data Request
Dated April 11, 2017**

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

LAND USE, SPECIAL INTEREST AREAS, AND VISUAL RESOURCES

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
Response to Data Request
Dated April 11, 2017

Category: Land Use, Special Interest Areas, and Visual Resources

Question Number: 80 **Question Subpart:** N/A

Question:

Provide revised land use, special interest area, and visual resources impact tables that reflect areas affected by the most currently proposed route and right-of-way configurations. This includes, but is not limited to, route variations adopted since issuance of the draft EIS, areas where the construction right-of-way has changed based on agency or landowner discussions, and areas where the permanent right-of-way along the AP-1 mainline would be reduced to 50 feet (per Staff Recommendation 13 of the draft EIS). The tables may be presented in their original format (per the resource reports, per a data request response, etc.); however, to accommodate updates, the information provided should contain data and details equivalent to that presented in the tables found in the draft EIS.

Response:

Updated resource impact tables based on the route adjustments that were filed on January 19, 2017 and other Project design changes that have occurred since the draft EIS was issued are provided as Q6 Attachment 1.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
Response to Data Request
Dated April 11, 2017

Category: Land Use, Special Interest Areas, and Visual Resources

Question Number: 82 **Question Subject:** a-b

Question:

In response to comments on the draft EIS, address the following regarding access roads:

- a. Describe how Atlantic would accommodate construction equipment and vehicles on public roads where the road is narrower than that previously discussed as needed to accommodate equipment (30 feet), located in steep terrain, etc. and no improvements have been identified by Atlantic; and
- b. For each access road where an improvement is required, clarify what specific improvement or modification would occur. Provide a revised access road table that identifies this information.

Response:

- a. Transportation of equipment, materials, and personnel will be addressed in a haul plan, which will augment the *Traffic and Transportation Management Plan* previously filed for the Projects (FERC Accession Number 20160718-5164). Narrow public roads in steep terrain may require the use of pilot cars, flaggers, and temporary lane closures to traverse select locations. Atlantic will coordinate these requirements through the haul plan, which will be provided prior to construction.
- b. The listed improvements include the need to “grade” or “re-grade” in select locations which accounts for the need to widen the turn radius of vehicles hauling equipment and/or material. All improvements to access roads will be limited to the 30-foot width. A revised access road table is provided with Q6 Attachment 1.

Response Provided By:

Carole McCoy
Director Engineering Services
804-775-5234

CULTURAL RESOURCES

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
Response to Data Request
Dated April 11, 2017

Category: Cultural Resources

Question Number: 89 **Question Subpart:** N/A

Question:

File correspondence with American Indian tribes not previously filed, and provide a comprehensive table of all tribal communications throughout the SHP and ACP projects.

Response:

Updated tables listing communications with Federal and State recognized Indian tribes were provided as Q89 Attachments 1 and 2, respectively, on May 1, 2017 (FERC Accession Number 20170501-5259). All correspondence to date with Indian tribes has been filed with the Commission.

Atlantic has contacted and is working to consult with American Indian tribes regarding tribal sites and the locations of natural resources that may be part of the tribes' traditional practices in Virginia and North Carolina. Atlantic will provide an update on these consultations when available.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
Response to Data Request
Dated April 11, 2017

Category: Cultural Resources

Question Number: 91 **Question Subpart:** N/A

Question:

File Virginia Cultural Resource Information System forms and any other State Historic Preservation Office (SHPO) site forms not previously filed or included in the survey reports.

Response:

Zip files containing Virginia Cultural Resource Information System and North Carolina Historic Property Survey Summary forms that have not been previously filed or included in survey reports are attached as Q91 Attachment 1. There are no other outstanding site forms not previously filed with FERC.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010

Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
Response to Data Request
Dated April 11, 2017

Category: Cultural Resources

Question Number: 95 **Question Subpart:** a-d

Question:

Provide updated cultural resources aerial maps at a 1:200 scale, printed preferably on 11- x 17-inch size pages, of the pipeline corridor, off-corridor facilities and yards, and access roads that show the following:

- a. The survey corridor and the construction workspace;
- b. Previously recorded and newly recorded archaeological sites and historic architecture resources within the APE. Differentiate sites that are recommended as eligible for listing on the NRHP or not evaluated for eligibility;
- c. Areas not surveyed; and
- d. Proposed HDD entry and exit locations, as well as proposed guide wire positions, traffic lanes, and any other workspace needed for horizontal directional drills or other drilling operations.

Response:

A set of aerial maps at 1:200-scale with the information requested in subparts a through c is provided as Q95 Attachment 1. Because the maps contain location information for archaeological sites, they are being filed under separate cover. The maps are marked "CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE".

With regard to subpart d, construction traffic associated with HDDs will be limited to the approved construction workspace outside the entry and exit points for each HDD. The position of guide wires, where used to complete HDDs, generally will be along the centerline of the pipeline between the exit and entry points.

Response Provided By:

Robert Bisha
Environmental Technical Advisor
804-273-3010