

**Mountain Valley Pipeline, LLC  
MVP Southgate Project  
Docket No. CP19-14-000**

**Post-Application Environmental Information Request #2  
Dated April 23, 2019**

**Federal Energy Regulatory Commission**

**Request:**

**Resource Report 1 – General Project Description**

1. Pursuant to the February 13, 2019 Environmental Information Request (EIR) item #2 regarding proposed contractor yards, provide:

- a. a more detailed rationale for the use of a large area of forested land as a contractor yard at CY-01 (31.7 acres) and confirmation that no reasonable options are available; and
- b. a plan to minimize forest clearing at CY-01 and CY-03 (4.2 acres); or provide alternative contractor yard locations.

**Response Submitted March 5, 2019:**

- a. The Project continues to refine the placement and location of contractor yards. The Project will provide an updated tabulation of contractor yards, including landowner status, and revised alignment sheets as part of the Supplemental Information Package to be submitted in March 2019. The Project will only seek to progress negotiations with landowners who are willing and interested in having this type of temporary workspace on their property.
- b. The Project is currently evaluating its proposed contractor yards and will provide an updated Table 1.3-4 within the Supplemental Information Package to be submitted in March 2019. Should contractor yard site(s) not be configured to avoid forested impacts, the Project will provide site-specific justification for the clearing of forested areas at each site.
- c. See Response 2.b.

**Supplemental Response submitted March 28, 2019:**

*A Revised Table 1.3-4 - Contractor Yards along the MVP Southgate Project Pipeline* is in Attachment Resource Report 1.

**Response Submitted May 13, 2019:**

- a. The size and shape of CY-01 has been updated to better reflect the current land use at this area. Recent construction activity has reduced the forested area at this location, however, recent aerial imagery does not reflect this disturbance.

Field survey data acquired in April 2019 for the Southgate Project has confirmed that this recently cleared area provides sufficient space for the proposed contractor yard. The revised size of CY-01 is 22.25 acres, or a 43% reduction in overall size. The Project does not anticipate any forested clearing will occur at this location. Due to the minimized tree clearing, the Project will continue to propose the use of this contractor yard. The revised footprint of CY-01 is provided in Attachment 1-1.

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- b. Similarly, the size and shape of CY-03 has been modified. Since the Project filed the 7c application in November 2018, additional survey data was collected at the contractor yard which identified a large waterbody feature on the western half of the site. Due to the location of the waterbody feature, the size of the contractor yard has been reduced, including a large section of forested land. The revised size of CY-03 is 16.85 acres, or a 35% reduction in overall size with forested impact reduced to approximately 0.10 acres, or a 98% reduction. Due to the minimized tree clearing, the Project will continue to propose the use of this contractor yard. The revised footprint of CY-03 is provided in Attachment 1-1.

The Project anticipates filing a revised Project footprint by May 24, 2019, which will include mapping to illustrate adjustments to the pipeline alignment and a table to reflect other minor updates to the Project footprint.

Name of Respondent: Mr. James Sabol  
Title: Project Manager  
Phone Number: 412-395-3597

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**Cumulative Impacts**

2. Pursuant to our pre-filing comments on draft Resource Report (RR) 1, dated October 5, 2018, discuss and quantify cumulative impacts on prime farmland. Provide the amount of impact (acres) and the duration of impact (e.g., temporary, or permanent) for projects in table 1.10-2 where information is available.

**Response Submitted May 13, 2019:**

Table 1.10-2 is included as Attachment 2-1 and includes revised acreages of prime farmland impacted by other projects within 1-mile (i.e., geographic scope for Land Use Resources) of the Southgate Project. The Transco Southeastern Trail, Virginia Southside Expansion, Mountain Valley Pipeline, Cypress Creek Renewables Solar Farm, Husky Solar Farm, Green Level-Charles Drew Solar Farm, Bakatsias Solar Farm, and East Alamance Quarry are located within 1-mile of the Southgate Project and impact areas mapped as Prime Farmland by the USDA NRCS web soil survey. Prime Farmland acres impacted for these projects were estimated using available pdf mapping on the North Carolina Utilities Commission website, the FERC eLibrary, and available aerial imagery. Additionally, cumulative impacts on prime farmland are quantified and discussed in the updated Section 1.10 (see Attachment 2-1).

Name of Respondent: Mr. Alex Miller  
Title: Environmental Manager  
Phone Number: 713-374-1599

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3. Pursuant to the February 13, 2019 EIR item #11, revise section 1.10.2 to discuss all projects listed in revised table 1.10-2, including those recently added, and only projects within the range of resource-specific geographic scopes for the MVP Southgate Project (“Southgate Project” or “Project”). Be sure to quantify impacts to all resources expected to be cumulatively affected. Examples of instances requiring revision to the table include, but are not limited to, the following:

- a. the revised table 1.10-2 lists the Big Hill Farm/Hopkins Road Improvement transportation project as potentially generating cumulative impacts; however, this project appears to be outside of the geographic scope for all resources evaluated as part of the Southgate Project; and
- b. table 1.10-2 cites potential/anticipated cumulative impacts from the Reidsville Energy Center to soils and sediments, water resources and wetlands, vegetation and wildlife, and air and noise, but no impacts are quantified in section 1.10.2.

**Response submitted March 5, 2019:**

The geographic scopes (or regions of influence) used for the Project’s cumulative impact analysis are provided in Resource Report 1, Section 10.1 (Table 1.10-1) and, apart from cultural resources, are consistent with the FERC staff in pre-filing comments on draft Resource Report 1, dated October 5, 2018. For cultural resources, the Project considered projects within 0.5 mile from centerline to take into account the maximum extent of the indirect effects area of potential effects (“APE”), rather than overlapping impacts within the Project APE (or direct effects), and considered the potential for cumulative visual impacts on architectural resources. The Project will provide an updated Table 1.10-2 within the Supplemental Information Package to be submitted in March 2019 to account for additional information acquired since the November 2018 filing.

**Supplemental Response submitted March 28, 2019:**

*A Revised Table 1.10-2 - Projects with Potential Cumulative Impacts* is in Attachment Resource Report 1.

**Response Submitted May 13, 2019:**

- a. The potential resource areas impacted within the geographic scopes for the Project’s cumulative impact analysis have been updated in Table 1.10-2 (see Attachment 2-1). The Big Hill Farm/Hopkins Road Improvement Transportation project has been removed from the table as it is no longer within the geographic scope of any cumulative resource area.
- b. Section 1.10.2 has been updated to include quantified impacts of the Reidsville Energy Center in the resource areas potentially affected within the geographic scope of cumulative impacts (see Attachment 2-1).

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4. The revised table 1.10-2 submitted as part of the March 28, 2019 supplemental filing includes acreages for 6 projects in the “Project” column. Explain what this information is in reference to (e.g. project impact area) and why acreages are not consistently reported for all projects in the table. For example, 29.1 acres is listed under Husky Solar, LLC under the “Projects” column, but the “Description” column states that the solar farm facility is 35 acres.

Questions 5-7 are based on an apparent misconception that only overlapping impacts, within the same space, contribute to cumulative impacts. Any resource impacts within that resource’s defined geographic scope are cumulative.

**Response Submitted May 13, 2019:**

Table 1.10-2 has been revised to include estimated impacted acres for all other projects, where available. Impact acres are identified where available by total project acres, upland forest acres, wetland acres by Cowardian type, acres within shared HUC 10 watersheds, and acres within shared HUC 12 watersheds (see Attachment 2-1).

Total acres for the Husky Solar Farm (and all other solar projects) are estimated from aerial pdf maps available on the North Carolina Utilities Commission website. The estimated acreage for Husky Solar Farm has been updated in the description in Table 1.10-2 in Attachment 2-1.

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5. Pursuant to the February 13, 2019 EIR items #12, 13.b, 13.d, 14.a, 14.b, 14.d, and 15.a, revise each response to include the *total* impacts within the HUC-10/HUC- 12 watersheds affected by the Southgate Project.

For example, EIR item #12.a.i. requested Mountain Valley to provide the acreage affected by the identified project within the HUC-12 watershed that it shares with the Southgate Project. This acreage should represent the total acreage that the project affects within the watershed, not just the acreage that overlaps with the Southgate Project footprint. Include all of the requested acreages of resource impacts in #12.a. and #12.b. for all projects where data is available. If data is not available for some of the projects, indicate as such.

**Response submitted March 5, 2019 EIR #12:**

The Project will provide an updated Table 1.10-2 within the Supplemental Information Package to be submitted in March 2019 that will include the requested acreage information for the HUC-12 and HUC-10 watersheds.

**Supplemental Response submitted March 28, 2019 EIR #12:**

*A Revised Table 1.10-2 - Projects with Potential Cumulative Impacts* is in Attachment Resource Report 1. The Updated Table 1.10-2 includes both the HUC-10 and HUC-12 for each project. Impacted acres within each watershed, for projects that overlap with the Southgate Project workspace are included in the updated Table 1.10-2. Additionally, streams crossed within each watershed that are also crossed by the Southgate Project workspace are included in revised Table 1.10-2.

Forested and wetland areas impacted by the Southgate Project and the projects that overlap with the Southgate Project workspace, are included in *New Table 12-1 – Cumulative Impacts Within HUC-10 Watersheds Affected by the Project* and *New Table 12-2 – Cumulative Impacts Within HUC-12 Watersheds Affected by the Project* in Attachment Resource Report 1.

**Response submitted March 5, 2019 EIR #13:**

The Project will provide new table within the Supplemental Information Package to be submitted in March 2019 that lists each HUC-12 watershed affected by the Project and include the requested wetland acreage and percent information.

**Supplemental Response submitted March 28, 2019 EIR #13:**

Forested and wetland areas impacted by the Southgate Project, the projects that overlap with the Southgate Project workspace, and percent of HUC-12 watersheds affected, are included in *New Table 12-2 – Cumulative Impacts Within HUC-12 Watersheds Affected by the Project* in Attachment Resource Report 1.

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**Response submitted March 5, 2019 EIR #14:**

The Project will provide a new table within the Supplemental Information Package to be submitted in March 2019 that lists each HUC-10 watershed affected by the Project and include the requested number and type of waterbody and percent information.

**Supplemental Response submitted March 28, 2019 EIR #14:**

The number and type of waterbodies crossed by the Southgate Project and other projects that overlap the Southgate Project workspace in each HUC-10, is provided in *New Table 14-1 – HUC-10 Waterbodies for the Southgate Project and Other Relevant Projects* below. The percentage of HUC-10 watershed affected by the Southgate Project and the projects that overlap with the Southgate Project workspace are included in *New Table 12-1 – Cumulative Impacts Within HUC-10 Watersheds Affected by the Project* in Attachment Resource Report 1.

**Response submitted March 5, 2019 EIR #15:**

- a. The Project will provide a determination whether a perennial stream crossed by the Project has the potential to be crossed by another project in the same HUC-10 watershed within the Supplemental Information Package to be submitted in March 2019.

**Supplemental Response submitted March 28, 2019 EIR #15:**

- a. The Mountain Valley Pipeline and the MVP Southgate Project pipeline both cross perennial streams Little Cherrystone Creek (S-F18-65, Project MP 0.4) and Cherrystone Creek (S-D18-18, Project MP 1.7) in the Cherrystone Creek-Banister River HUC-10 watershed. Neither crossing location is located within overlapping workspace areas for the projects. The Mountain Valley Pipeline crosses Little Cherrystone Creek approximately 3.5 miles upstream of the MVP Southgate Project pipeline crossing. The Mountain Valley Pipeline crosses Cherrystone Creek approximately 10.0 miles upstream of the MVP Southgate Project pipeline crossing. MVP proposes to construct the stream crossings for the projects in accordance with the FERC (2013) Wetland and Waterbody Construction Procedures to minimize impacts on the streams. The stream crossings are separated by construction schedule and distance, and the crossings will be restored and are expected to return to a pre-construction state over time. Therefore, no cumulative impacts on the streams are anticipated from construction or operation of the MVP projects.

Based on review of field survey data for the MVP Southgate Project, and review of the United States Geological Survey National Hydrography Dataset, there are no streams within the workspace for the Cypress Creek Renewables Solar Farm or the Husky Solar Farm; therefore, no cumulative impacts on surface waters are anticipated from construction of the projects.

**Response Submitted May 13, 2019:**

The revised Table 1.10-2 includes total impacts for each project within the same HUC-10/HUC- 12 watersheds affected by the Southgate Project, where available (see Attachment 2-1). Where not available, this is indicated as such in the Table. The Project used the following methods to estimate impact acres for



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other projects in Table 1.10-2:

The Project used the topographic mapping available in the Virginia Southside Expansion Project Environmental Assessment (Accession Number 20130614-4004) Appendix A Topographic Maps of pipeline Route and Facilities Map 1 of 28 to estimate shared HUC 10 and HUC 12 acres affected by the Virginia Southside Expansion project. The pipeline right-of-way within shared HUC 10 and HUC 12 watersheds was multiplied by the construction width of 85 feet provided in Figure 3 (Typical Right-of-Way Cross-Section Collocated) in the Environmental Assessment to estimate pipeline acres.

The Project used the aerial photography mapping available in the Transco Southeastern Trail Project Certificate Application (Accession Number 20180411-5132) to estimate shared HUC 10 and HUC 12 acres affected by the Transco Southeastern Trail project (i.e., Station 165).

For solar projects, the Project used aerial maps available on the North Carolina Utilities Commission website to estimate shared HUC 10 and HUC 12 acres affected by each solar project.

Consistent mapping was not available on the Virginia and North Carolina Department of Transportation websites for all transportation projects. To estimate the shared HUC 10 and HUC 12 acres affected by each transportation project, the Project used available information on the state departments of transportation websites including project descriptions, street mapping, and drawings with aerial backgrounds, as available for each project. Where the width of roadways was not provided, the Project assumed an estimated road width of 30 feet to estimate acres affected.

For commercial, industrial, residential projects, the Project used project descriptions from agency correspondence and County websites, and Google Earth imagery to estimate the shared HUC 10 and HUC 12 acres affected by each commercial, industrial and residential project.

The Project used Google Earth imagery to estimate the shared HUC 10 and HUC 12 acres affected by the East Alamance Quarry.

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6. In Mountain Valley's new tables 12-1 and 12-2 provided in the March 28, 2019 supplemental filing, 'Other Relevant Projects' should include all projects that are within each specific watershed in order to assess total cumulative impacts on each watershed as a whole. For example, for the Cascade Creek-Dan River Watershed, include impact acreages for all projects listed in table 1.10.2 that occur in that watershed, not just those projects that overlap with the Southgate Project workspace. If data is not available for some of the projects, indicate as such.

**Response Submitted May 13, 2019:**

The shared HUC 10 and HUC 12 watershed impacted acres for the other projects in revised Table 1.10-2 are now included in Table 1.10-2, where available (see Attachment 2-1). Where data is not available, this is indicated in Table 1.10-2.

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7. Revise New Table 14-1 to include all HUC-10 watersheds affected by the Southgate Project, not just the HUC-10 watersheds where other projects overlap with the Southgate Project workspace. Additionally, as explained in #6 above, “Other Relevant Projects” should include all projects listed in table 1.10-2 that occur within each specific HUC-10 watershed, not just the projects that overlap the Southgate workspace.

**Response Submitted May 13, 2019:**

New Table 14-1 in Attachment 2-1 has been updated to include other projects in revised Table 1.10-2. Table 14-1 is incorporated in to the updated Section 1.10 in Attachment 2-1 as Table 1.10-5. Mapping included in the FERC eLibrary, available aerial imagery, and the USGS National Hydrography Dataset (NHD), were used to determine number of stream crossings for other projects in HUC 10 watersheds shared with the Project.

The Project assumed that no streams are crossed by the solar projects or by the commercial / industrial / residential projects in Table 1.10-2 in Attachment 2-1. Review of the transportation projects in Table 1.10-2 within shared HUC 10 watersheds identified one road project (i.e., NC 119 relocation) with stream crossings. The NC 119 relocation project crosses one NHD perennial and one NHD intermittent stream. Therefore; the only other projects listed in Table 1.10-2 that are included in New Table 1.10-5 are the Virginia Southside Expansion project, the Transco Southeastern Trail project, the Mountain Valley Pipeline, the NC 119 relocation project, and the East Alamance Quarry. The only shared HUC 10 watersheds for these four other projects are Cherrystone Creek – Banister River, Stinking Creek – Banister River, and Back Creek – Haw River (see New Table 1.10-5 in Attachment 2-1).

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8. For the New Tables 12-1 and 12-2 provided in the March 28, 2019 supplemental filing confirm the following:

- a. Cypress Creek Renewables Solar Farm described in footnote a/ is the Williamsburg Solar, LLC project listed in the revised Table 1.10-2; and footnote d/ of Table 12-1 refers to “HUC-12 watershed” instead of “HUC-10 Watershed”.

**Response Submitted May 13, 2019:**

The Project confirms that Cypress Creek Renewables Solar Farm is the Williamsburg Solar, LLC project listed in revised Table 1.10-2 (see Attachment 2-1). Table 1.10-2 has been revised to include both the project name and the project proponent for clarification.

Footnote d/ of Table 12-1 refers to “HUC-10” watershed and footnote d/ of Table 12-2 refers to “HUC 12” watershed.

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9. Pursuant to the February 13, 2019 EIR item #16, Mountain Valley’s response states that 6 solar generation projects were identified; however, Attachment 16-1 lists 5 solar generation projects. The March 28, 2019 supplemental filing revised Table 1.10-2 lists the Sigora Solar Farm as the potential 6th project; however, the address for this facility appears to be a single family home within a residential neighborhood. Discuss the missing solar generation project, and provide updates to Table 1.10-2 with all solar generation project information.

**Response submitted March 5, 2019:**

The Project identified six solar generation facilities. Details about each solar facility identified are included in Attachment 16-1. Information for the solar generation facilities was obtained from the North Carolina Public Utilities Commission website, county GIS websites and conversations with County Planning officials. Potential cumulative impacts resulting from these projects within the major projects geographic scope (5 miles from the Project) are similar to other construction projects in the area. These impacts are expected to be temporary and minor.

The Williamsburg Solar, LLC 80MW solar generation facility in Gibsonville, North Carolina is a proposed 600 acre facility located immediately adjacent to, and east and west of the Project between approximate mileposts 49 to 50. The facility is also and immediately adjacent to the Transco right-of-way. The Certificate for Public Convenience and Necessity for the Williamsburg Solar Project was issued in September 2018, and construction is anticipated to begin in 2019. Cumulative impacts resulting from the project would be associated with soils and sediments, water resources and wetlands, visual resources, vegetation and wildlife, and air and noise as described in Resource Report 1 section 1.10.5.

Husky Solar Farm, owned by Husky Solar, LLC, located in Reidsville, North Carolina is a 35–acre, 7.02 megawatt Direct Current solar photovoltaic facility located on both sides of North Carolina Highway 87. The Project is adjacent to the solar farm between approximate mileposts 48.7 to 48.9. This facility was permitted prior to 2015, and is currently in operation. Cumulative impacts resulting from this project would be associated with soils and sediments, water resources and wetlands, visual resources, vegetation and wildlife, and air and noise as described in Resource Report 1, Section 1.10.5.

**Response Submitted May 13, 2019:**

Table 1.10-2 has been updated with all solar information available (see Attachment 2-1). Sigor Solar has been revised to reflect that it is not a solar farm project, it is a residential solar rooftop installation. The project is noted in the table as not requiring ground disturbance; therefore, no cumulative impact on resources within the geographic scopes of the Project are anticipated.

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10. Pursuant to the February 13, 2019 EIR item #16, for each solar generation project identified within a HUC-12 or HUC-10 watershed of the Southgate Project, provide the data requested in items #12.a., 12.b, 13.b., 13.d., 14.a, 14.b., 14.d, and Also include the following facilities potentially located within HUC-10 and HUC-12 watersheds affected by the Southgate Project:

- a. Gallant Solar Farm, NC Utilities Commission Docket # SP-10241;
- b. Washington Solar, NC Utilities Commission Docket # SP-6053;
- c. Old Road Solar, NC Utilities Commission Docket # SP-6991;
- d. Green Level-Charles Drew Solar Energy Farm, NC Utilities Commission Docket # SP-13214;
- e. Osceola Solar Project, NC Utilities Commission Docket # SP-7976;
- f. Bakatsias Solar Farm, NC Utilities Commission Docket # SP-7457;
- g. Norris Solar Farm, NC Utilities Commission Docket # SP-7785; and
- h. Necal Farm, NC Utilities Commission Docket # SP-8039.

**Response submitted March 5, 2019:**

See Data Response #9 above.

**Response Submitted May 13, 2019:**

The Project updated Table 1.10-2 to include the requested information and the additional solar projects, where available (see Attachment 2-1).

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11. Pursuant to the February 13, 2019 EIR item #17, further describe all resource- specific (i.e. biological, socioeconomic, etc.) cumulative impacts resulting from ongoing or potential resource extraction operations in the full range of resource- specific geographic scopes of the Southgate Project, or confirm that none exist.

**Response submitted March 5, 2019:**

There are no projects or operations that impact geologic resources within the relevant geographic scope for cumulative impacts. No resource extraction operations were located within the workspace of the Project. Mineral resources and oil and gas wells found within 0.25 miles of the Project are discussed in Resource Report 6, Section 6.4.

**Response Submitted May 13, 2019:**

Two ongoing resource extraction operations identified by the Project in the vicinity of the Southgate Project have been added to Table 1.10-2 (see Attachment 2-1). Additionally, the updated Section 1.10 (see Attachment 2-1) includes a discussion of these two operations where they fall within the geographic scope of cumulative resources. The updated Section 1.10 includes a discussion of mineral resources identified more than 0.25 mile from the Project and within the geographic scopes of cumulative resources (see Attachment 2-1).

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**Request:**

**Resource Report 2 – Water Use and Quality**

**Water Resources**

12. Pursuant to the February 13, 2019 EIR item #20, Mountain Valley’s response was incomplete. Provide a response to EIR item #20 part E in reference to the items 5(a) through 5(c) of the Virginia Department of Environmental Quality (VADEQ) January 10, 2019 comments

**Response submitted March 5, 2019:**

The Project responded to the Virginia Department of Environmental Quality Items 1 through 4 on March 5, 2019 and stated that updated delineation maps and acreages based on survey work completed through the end of January 2019 within the Supplemental Information Package submitted in March 2019.

**Supplemental Response submitted March 28, 2019:**

Updated delineation information (*Virginia Wetland and Waters Delineation Report Addendum 1*) incorporating changes made to delineated resources based on USACE site review and Project workspace shifts in Virginia is included in Attachment 20-1. The Project will continue to conduct environmental field surveys in April 2019 and will continue field survey efforts until complete.

**Response Submitted May 13, 2019:**

Below are VADEQ Comments items 5(a) through 5(c) and updated responses:

***VADEQ Comment: 5 Water Planning and Monitoring.***

*According to Resource Report 2 (page 2-6), there are no public water supply wells or springs that are located within 150 feet of the construction area. Where access is granted, MVP is conducting landowner and civil surveys, which includes efforts to identify private water resources within 150 feet of the alignment work area (page 2-6).*

*Construction, operation, and maintenance of facilities are not anticipated to have significant or long-term impacts on groundwater resources (page 2-10).*

*Construction methods at waterbody crossings will vary based on the characteristics of the waterbody at the time of crossing and will be performed consistent with applicable regulatory approvals (page 2-18).*

**Response to VADEQ Comment:**

The Project confirms that the above statements are accurate.



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***VADEQ Comment: 5(a) Agency Jurisdiction.***

*The DEQ Water Monitoring and Assessment Program extensively tests Virginia's rivers, lakes and tidal waters for pollutants pursuant to the Virginia Water Quality Monitoring, Information and Restoration Act (§ 62.1-44.19:4 - § 62.1-44.19:11). In addition, the State Water Control Law mandates the protection of existing high-quality state waters and provides for the restoration of all other state waters so they will permit reasonable public uses and will support the growth of aquatic life. The adoption of water quality standards under Section 62.1-44.15(3a) of the law is one of the State Water Control Board's methods of accomplishing the law's purpose.*

**Response to VADEQ Comment:**

The Project acknowledges the agency's jurisdiction for monitoring, assessing, and protecting Virginia's water quality and will comply with applicable regulations.

***VADEQ Comment: 5(b) Agency Findings.***

- ***Section 2.3 Surface Water Resources.***
  - *The attached benthic fact sheets do not indicate that waters in the area have benthic scores that are consistently above 72. A benthic score of 72 or greater would indicate an exceptional benthic community.*
  - *DEQ agrees that there are no trout waters as designated in the Virginia water quality standards regulation.*
- ***Section 2.3.2.5 Contaminated Sediments and Impaired Waters.***
  - *DEQ appreciates the inclusion of a restriction on hydroseeding within 100 feet of tributaries to the Dan River. DEQ appreciates the consideration taken for Cherrystone Creek's Mercury in Fish Tissue observed effect as noted on page 2-24.*

**Response to VADEQ Comment:**

The Project acknowledges the agency findings.

***VADEQ Comment: 5(c) Agency Recommendations.***

***5(c)(i) Resource Report 12 - PCB Contamination.*** *If PCBs are found in historical pipes that are to be joined to new pipe or where the surrounding soils are found to be contaminated with PCBs, mitigation must go well below 50 parts per million (ppm) as Virginia's Water Quality Criteria for PCBs is 640 picograms per liter (pg/L), which is around 8 orders of magnitude below 50 ppm. Using the 50 ppm threshold and exceptions to go above the 50 ppm threshold, especially when those soils are mobilized through the construction of this pipeline, will only put additional burdens on other sources of PCBs. Therefore, PCBs should be mitigated to the maximum extent practicable. Results of this work can be shown using EPA method 1668.*

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**Response to VADEQ Comment:**

The Project confirms that if PCB's are found in pipeline interconnections or surrounding soils in excess of 50 ppm, they will be mitigated to the maximum extent practicable and results will be shown using EPA method 1668.

***5(c)(ii) Resource Report 2 - Water Use and Quality.***

- ***Section 2.2.3 Water Supply Resources.*** While there are no public water supply (PWS) intakes within 3 to 5 miles of the project, there are several waters that are proposed to be crossed that have the PWS designation. These waters should be identified.

**Response to VADEQ Comment:**

The waterbodies with a PWS designation that are proposed to be crossed by the Project include:

Impact ID	Milepost	Waterbody Name	Waterbody Type	Latitude	Longitude
S-E18-52	20.4	Tributary to Trayner Branch	Perennial	36.60595	-79.5681
S-E18-54	20.6	Tributary to Trayner Branch	Perennial	36.60326	-79.5704
S-D18-34	21	Trayner Branch	Perennial	36.5989	-79.5742
S-D18-40	21.2	Tributary to Trayner Branch	Perennial	36.59583	-79.5771
S-A18-205	22	Tributary to Trotters Creek	Intermittent	36.58751	-79.5862
S-A18-203	22.1	Tributary to Trotters Creek	Intermittent	36.58684	-79.5869
S-A18-206	22.2	Tributary to Trotters Creek	Intermittent	36.58562	-79.5882
S-F18-43	23	Tributary to Trotters Creek	Intermittent	36.57647	-79.5972
S-F18-40	23.2	Trotters Creek	Perennial	36.57402	-79.5997
S-F18-38	23.5	Tributary to Dan River	Intermittent	36.57034	-79.6034
S-E18-34	23.9	Tributary to Dan River	Perennial	36.56585	-79.6078
S-F18-34	24.4	Tributary to Dan River	Perennial	36.56087	-79.6129
AS-F18-33 / S-F18-33	24.8	Tributary to Dan River	Perennial	36.55637	-79.6179
S-C18-89	25.1	Tributary to Dan River	Perennial	36.55252	-79.6218
S-C18-90	25.7	Tributary to Dan River	Perennial	36.54597	-79.6284
S-C18-92	25.9	Tributary to Dan River	Intermittent	36.54432	-79.63

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- **Section 2.3.2 Sensitive Water Bodies.**
  - *The use of chemicals that pose a threat to human health and/or have implications for water quality criteria for human health (PCBs included) should be avoided or mitigated with controls to the maximum extent practicable.*

**Response to VADEQ Comment:**

The Project will avoid the use of chemicals with implications for water quality criteria or human health to the extent practicable.

As stated in Resource Report 1 – The Project will handle any hazardous materials stored or encountered during construction in accordance with the Project-specific Spill, Prevention, Control, and Countermeasures Plan and Unanticipated Discovery of Contamination Plan. All waste would be disposed of at an approved, off-site facility.

As stated in Resource Report 2 – Test water will contact only new pipe, and no chemicals will be added to the test water unless otherwise approved by FERC and applicable federal and/or state regulatory agencies. If a municipal water source with chlorinated water is used for testing, the addition of an approved dechlorinating agent may be required prior to discharge depending on the discharge location.

Once a segment of pipe has been successfully tested and dried, the test cap and manifold will be removed, and the pipe will be connected to the remainder of the pipeline. No desiccant or chemical additives will be used to dry the pipe. The Project will implement Section VII of the FERC Procedures regarding hydrostatic testing, as well as any specifications pertaining directly to hydrostatic testwater discharge in applicable regulatory approvals.

- *Will implementation plans be considered as it relates to the seventh bullet on page 2-19?*

**Response to VDEQ Comment:**

Yes, the seventh bullet on page 2-19 of Resource Report 2 (waters that have been designated for intensified water quality management and improvement) includes waters with approved implementation plans.

- *Include streams that have a public water supply designation in water quality standard (16 crossings - see excel sheet attached).*
  - *Below Highway 58 and west of Danville, all of the stream crossings from the pipeline are public water supply waters. These are all tributaries to the Dan River.*

**Response to VDEQ Comment:**

Streams with a public water supply designation will be treated as sensitive surface water bodies as described in Section 2.3.2.

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- **Section 2.3.2.2 State-Designated Use and Exceptional Waters.**
  - This section refers to Appendix 2-A and states that it contains water classifications including designated uses. However, it does not include the designated uses. Consider the waters with a Public Water Supply designated use in the analysis.

**Response to VDEQ Comment:**

Appendix 2-A (Resource Report 2) was updated to include designated uses and was provided within the Supplemental Information Package submitted in March 2019.

- *DEQ states that "the majority of the streams crossed by the project have not been assessed by the state and, therefore, default to the minimal four designated uses for all streams in Virginia" is a confusing statement.*
- *Assessment determines whether designated uses are being attained. Assessment does not determine whether designated uses exist. DEQ recommends dropping the last clause from the sentence. Also, the sentence afterwards could be made clearer by stating that all waterbodies that are crossed by the project have the aquatic life, wildlife, fish consumption, and recreation designations, while some of the waters also have the public water supply designation. Consider revising this section as follows:*

**2.3.2.2 State-Designated Use and Exceptional Waters**

*Virginia and North Carolina ~~classify~~ evaluate water quality of surface waters with respect to designated uses ~~to evaluate water quality~~. Each system includes a. ~~Each system includes a~~ "designated ~~tion~~ use" ~~that~~ describes the potential or realized capacity of a waterbody to provide defined ecological benefits and recreational values for residents and visitors. A summary of the use designation system for each state is provided below. State water ~~classifications~~ designation for waterbodies crossed by the Southgate Project route are detailed In Appendix 2-A.*

*In Virginia, the VADEQ ~~assigns six primary classifications~~ designates six uses for surface waters; aquatic life, fish consumption, public water supplies, recreation, shellfishing, and wildlife. The ~~primary classifications~~ uses of waterbodies crossed by the Southgate Project are defined as follows;*

- *Aquatic life use: supports the propagation, growth, and protection of a ~~balances~~ balanced indigenous population of aquatic life which may be expected to inhabit a waterbody;*
- *Fish consumption use: supports game and marketable fish species that are safe for human health;*
- *Public water supply use: supports safe drinking water;*
- *Recreation use: supports swimming, boating, and other recreational activities;*
- *Wildlife use: supports the propagation, growth, and protection of associated wildlife.*

*Additional subcategories have been designated for aquatic life classifications, but those additional subcategories do not apply to any waterbodies within the Southgate Project area. ~~The majority of the streams crossed by the Project have not been assessed by the state and, therefore, default to the~~*

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~~minimal four designated uses for all stream in Virginia (Aquatic Life, Recreation, Fish Consumption, and Wildlife). All of the waterbodies that have been assessed by the state, and are crossed by the Project, have one or multiple of the following designations are designated for the aquatic life, public water supply, wildlife, fish consumption, and recreation uses. Some of the waterbodies crossed by the Project are also designated for the public water supply use. (see Appendix 2 A).~~

**Response to VDEQ Comment:**

The Project accepts the suggested changes to Section 2.3.2.2 State-Designated Use and Exceptional Waters.

- **Section 2.3.2.3 Waters Containing Federally or State-listed Threatened or Endangered Species or Critical Habitat.** DGIF should be consulted to confirm statements about trout waters, endangered or threatened species or special concern fisheries.

**Response to VDEQ Comment:**

Waters crossed by the Project are considered warm water fisheries and do not support trout. The Project continues to coordinate with VDGIF to identify rare, threatened and endangered species. VDGIF and VDCR have identified the Banister and Sandy rivers a high quality habitats that support rare freshwater mussels. Mussel surveys occurred in Spring 2019 and no listed mussels were identified. The Project will file the results of these surveys with VDGIF and VDCR for review and comment upon finalizing the report. Consultation with VDGIF has also identified a nesting bald eagle within 8 miles of the northern portion of the Project in Pittsylvania county, and so the Project will conduct an aerial survey for nesting bald eagle and rookeries prior to construction.

- **Section 2.3.2.5 Contaminated Sediment and Impaired Waters.**
  - Specify *E. coli* as the pollutant on page 2-24 in paragraph 5.
  - Reference the total maximum daily loads (TMDLs) addressing the impairments
    - Dan River: <https://www.deq.virginia.gov/portals/O/DEQ/Water/TMDL/apptmdls/roankrwr/danec.pdf>
    - Banister River:  
<https://www.deq.virginia.gov/portals/O/DEQ/Water/TMDL/apptmdls/roankrwr/banister.pdf>
  - Add a discussion of downstream impairments:
    - Bannister- VAC-L67R\_BAN04A08---- *E. Coli*
    - Dan River- VAC-57R\_DAN04A00--- *E. Coli*
    - (5A) Dan River- VAC-57R\_DAN01A00--- Mercury in Fish Tissue,
    - PCB in FT
  - Reference the implementation plans in the following watersheds:
    - Banister watershed: Implementation plans cover headwaters but not where pipeline is proposed to cross.
    - Dan River watershed: Not approved by the U.S. Environmental Protection Agency but completed in 2018.

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**Response to VDEQ Comment:**

The Project acknowledges three waterbodies crossed by the Project in Virginia are designated as “Category 4a Impaired” (Little Cherrystone Creek, White Oak Creek (crossed twice by the Project) and Sandy Creek) due to *E. coli* caused impairment for the streams’ recreational state surface water designation. The Project also acknowledges there are impairments in the Banister and Dan River, downstream of the Project, that are caused by *E. coli* as well as mercury and PCBs in fish tissue. TMDL’s have been developed for the impaired portions of the Upper Banister River watershed (MapTech, 2011<sup>1</sup>) including White Oak Creek and Little Cherrystone Creek, and the Dan River watershed (DRBA, 2018<sup>2</sup>), which includes Sandy Creek. The Dan River implementation plan has not yet been approved by the EPA. Implementation plans have been developed for both impaired watersheds. The implementation plan for the Upper Banister River watershed (VADEQ, 2011<sup>3</sup>) covers the headwaters, but not the portion of the watershed that is crossed by the Project. The Dan River watershed implementation plan (DRBA, 2018<sup>4</sup>) covers the Project limits.

- *On page 2-25 the report acknowledges the implementation of best management practices (BMPs) intended to minimize E. coli loads and states that the dry cut methods will not introduce any more bacteria. DEQ appreciates the included acknowledgement and suggests adding language to acknowledge that installed BMPs that would be damaged or compromised by the construction of the pipeline, would need to be maintained or replaced elsewhere by MVP.*

**Response to VDEQ Comment:**

The Project confirms that any installed BMPs damaged or compromised by the Project will be maintained or replaced by the Project.

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<sup>1</sup> VADEQ, 2007. Bacteria TMDL Development for the Banister River, Bearskin Creek, Cherrystone Creek, Polecat Creek, Stinking River, Sandy Creek, and Whitehorn Creek Watersheds. Submitted by VADEQ, Prepared by George Mason University and the Louis Berger Group. <https://www.deq.virginia.gov/Portals/0/DEQ/Water/TMDL/apptmdls/roankrvr/banister.pdf>. Accessed February 24, 2019.

<sup>2</sup> VADEQ, 2008. Bacteria TMDL Development for the Dan River, Blackberry Creek, Byrds Branch, Double Creek, Fall Creek, Leatherwood Creek, Marrowbone Creek, North Fork Mayo River, South Fork Mayo River, Smith River, Sandy Creek, and Sandy River Watersheds. Submitted by VADEQ, Prepared by George Mason University and the Louis Berger Group. <https://www.deq.virginia.gov/portals/0/DEQ/Water/TMDL/apptmdls/roankrvr/danec.pdf>. Accessed February 24, 2019.

<sup>3</sup> MapTech, Inc. 2011. A Plan to Reduce Bacteria Sources in the Upper Banister River and Tributary Watersheds. Prepared for: VDCR; submitted by MapTech, Inc. <https://www.deq.virginia.gov/Portals/0/DEQ/Water/TMDL/banisterip.pdf>. Accessed February 24, 2019.

<sup>4</sup> Dan River Basin Association. 2018. Implementation Plan Dan River Watershed Quality Improvement. Sponsored by the River Bank Fund. <https://www.danriver.org/content/danriver/uploads/waterqualityplan.pdf>. Accessed February 24, 2019.

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- *Table 2.A-1 and Appendix A-2:*
  - *Waterbody S-F18-63 is listed as Sandy Creek but the corresponding latitude and longitude coordinates appear to be an unnamed tributary of Little Cherrystone Creek. Evaluate whether the stream name is correct.*

**Response to VDEQ Comment:**

The comment is accurate. S-F18-53 is a tributary to Little Cherrystone Creek. Appendix 2-A (Resource Report 2) will be revised to reflect this. The updated Appendix was provided within the Supplemental Information Package submitted in March 2019.

- *Trotters Creek and the Sandy River are fully supporting for Aquatic Life Use, Recreational Use, and Wildlife Use. Crossings in these areas need to be particularly sensitive to disturbances as impacts to the benthic macroinvertebrates (not mentioned in Resource Report 2) can be long lasting from settled solids. Fish can migrate away but macroinvertebrates, which are used to access the aquatic life use, cannot.*

**Response to VDEQ Comment:**

The Project acknowledges that Trotters Creek and Sandy River support benthic macroinvertebrates and other aquatic life and that are sensitive to sedimentation. The crossings will be constructed according to the FERC Procedures and the Project-specific E&SC Plan to minimize potential impacts.

- *Appendix 2A: Correct the following information:*
  - *Waterbody ID S-D18-2 (White Oak Creek) is identified as public water supply (PWS) but it is not designated as such at the latitude and longitude provided in Appendix 2-la.*
  - *Waterbody ID S-F18-50 (Trib to Sandy River) is identified as PWS, but it is not designated as such at the latitude and longitude provided in Appendix 2-la.*

**Response to VDEQ Comment:**

Appendix 2-A (Resource Report 2) will be updated to remove the PWS designation for S-D18-2 and S-F18-50. The revised Appendix was provided within the Supplemental Information Package submitted in March 2019.

- *Table 2 - Analytes for water supply testing (wells): Consider using E.coli instead of fecal coliforms.*

**Response to VDEQ Comment:**

Table 2 (Resource Report 2 Appendix 2-E) was revised by replacing fecal coliforms with *E. coli* and re-submitted within the Supplemental Information Package in March 2019.

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Title: Environmental Manager  
Phone Number: 713-374-1599

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**Request:**

**Resource Report 2 – Water Use and Quality**

**Water Resources**

13. Pursuant to February 13, 2019 EIR item #20 regarding ‘VADEQ Comment: 3(b) Agency Recommendations’ for screen opening sizes for hydrostatic water intake, provide a more detailed rationale for not following the specific recommendation of the VADEQ to use intake screens with openings no larger than 1 millimeter or include documentation of approval from the VADEQ. Also, confirm that no corresponding guidelines exist for North Carolina waters.

**Response Submitted May 13, 2019:**

The Project will adhere to the following VADEQ guidance Project-wide to avoid an adverse effect or impairment to surface water:

- Withdraw no more than 10% of the instantaneous flow rate from the channel;
- Use intake screens with opening not larger than 1 millimeter; and
- Use approach velocity not greater than 0.25 feet per second.

In addition, the Project-wide water withdrawal plans include the following additional measures:

- Use floating intake structures to avoid impacts on the stream bed; and
- For surface water withdrawals from the Dan River, adhere to time-of-year restrictions to avoid impacts on rare, threatened and endangered species during critical life stages.

The Project is coordinating with USFWS and NCWRC on any existing guidelines and the Project’s proposed water withdrawal and discharge plans.

Name of Respondent: Mr. Alex Miller  
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**Request:**

**Resource Report 2 – Water Use and Quality**

**Water Resources**

14. Pursuant to the February 13, 2019 EIR item #29, based on information provided by Mountain Valley and the ongoing consultation with the Virginia Department of Conservation and Recreation (VDNR), provide a detailed, site-specific construction mitigation and restoration plan for the crossing of the Sandy River. In this plan, describe in appropriate detail the construction methods, the location of staging areas, recommendations from federal, state, and local agencies, and how Mountain Valley would implement the recommendations. If Mountain Valley proposes not to carry out any of these recommendations, provide specific reason(s) and identify whether you propose other mitigation.

**Response submitted March 5, 2019:**

In order to minimize impacts associated with an Open-Cut Dry Ditch crossing method and to ensure the crossing would not affect the current/future designation of the Banister River as a Blueway, or the Sandy River as a scenic river, the Project will co-locate both crossings with the existing maintained Williams-Transco right-of-way. Co-locating the river crossings with the existing maintained right-of-way minimizes the amount of new riparian vegetation clearing at the crossing locations. The existing, maintained Williams-Transco right-of-way at the Banister River crossing (MP 4.9) is approximately 200-feet wide, and the Project will maintain an additional 10-feet of right-of-way during operation at the crossing. The existing, maintained Williams-Transco right-of-way at the Sandy River crossing (MP 17.7) is approximately 125-feet wide, and the Project will only maintain 10-feet of right-of-way during operation at the crossing. Based on the presence of the existing maintained right-of-way, and the minimal amount of new maintained right-of-way, no significant impact on the scenic quality or future designation of the Banister or the Sandy Rivers is anticipated from construction or operation of the Project.

To further minimize impacts on the natural setting and riparian vegetation along the Banister and Sandy Rivers during operation, the Project will limit routine vegetation mowing or clearing adjacent to the rivers to a 10-foot wide corridor centered on the pipeline, within 25 feet of the mean high-water mark of the river, in accordance with the FERC Procedures. In addition, trees that are located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent right-of-way. Long-term, operation of the pipeline at the Banister and Sandy River crossings is not anticipated to affect any potential designation of these river segments based on the presence of the existing maintained right-of-way at the crossing locations.

In conclusion, the Project believes that the Open-Cut method is preferable due to the short time frame associated with potential water quality impacts, the minimal impact of riparian buffer, and the benefits associated with co-location with the Williams-Transco pipelines.

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**Response Submitted May 13, 2019:**

A detailed, site-specific construction mitigation and restoration plan for the crossing of the Sandy River is included in Attachment 14-1.

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**Request:**

**Resource Report 3 – Fish, Wildlife, and Vegetation**

**Vegetation and Wildlife**

15. Pursuant to the February 13, 2019 EIR item #41, confirm that any clearing between the HDD entry and exit points would be done by hand and only to the extent necessary for the guidewire path (no more than 3 feet wide).

**Response submitted March 5, 2019:**

As necessary, the Project intends to clear vegetation within a five-foot path between the HDD entry and exit workspace areas to allow for placement of the HDD guide wire. The proposed workspace will be depicted on revised alignment sheets to be submitted within the Supplemental Information Package to be filed in March 2019. The land use impacts associated with the workspace for the guide wire will be limited to construction only. The Project will not conduct periodic vegetation maintenance within the portion of the operational easement between the HDD entry and exit points. Updated impact tables that include the workspace for the HDD guide wire will also be included within the Supplemental Information Package.

**Supplemental Response submitted March 28, 2019:**

*A Revised Table 3.4-1 - Vegetation Acreage Affected by Construction and Operation of the MVP Southgate Project is in Attachment Resource Report 3. Construction acres in revised Table 3.4-1 include a five-foot path between the HDD entry and exit workspace areas to allow for placement of the HDD guide wire.*

Revised alignment sheets are provided in Attachment 140-1 of Question #140 within this supplemental response package.

**Response Submitted May 13, 2019:**

The Project confirms that any clearing between the HDD entry and exit points would be done by hand and only to the extent necessary for the guidewire path. The Project has previously provided impacts associated with the guidewire for an approximate five-foot path, however, the Project will agree to reduce this area to three feet to allow for hand clearing and to allow construction personnel to visually inspect the HDD alignment on foot on either side of the crossing.

Name of Respondent: Mr. Alex Miller  
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**Vegetation and Wildlife**

16. Pursuant to the February 13, 2019 EIR item #43, include State-specific herbicide requirements/methods in the Exotic and Invasive Plant Species Control Plan or provide a reference as to where they can be found.

**Response submitted March 5, 2019:**

The Project coordinated with NCNHP and VDCR regarding exotic and invasive plants (see Attachment 52-1). The Exotic and Invasive Plant Species Control Plan (Plan) was submitted to NCNHP and VDCR on February 20, 2019 for review and comment. VDCR responded on February 25, 2019 requesting inclusion of and reference to the entire VA DCR Invasive Species List. The Project will address this recommendation as part of the final Plan. NCNHP responded on March 4, 2019 stating that implementing the Plan will help to protect any natural areas or rare species within the vicinity from the spread of invasive species and that the Plan is sufficient for the work to be done in protecting rare species and natural areas in the vicinity.

As part of the Plan, the ROW will be monitored for increased cover of invasive plant species populations for two years following restoration of construction disturbance. Any significant increase in invasive cover associated with the Project will be treated with methods prescribed by the VDCR or the NCNHP, with landowner preference taken into account, in each of their respective states. Each of these organizations provide species specific control methods, including guidance on herbicide use. If specified for use by federal or state agencies near streams or wetlands, the Project will utilize herbicide applications approved for aquatic use.

**Response Submitted May 13, 2019:**

If herbicide treatment is necessary to control the spread of invasive species, the Project will employ a state-certified applicator to ensure compliance with federal and state regulations.

Virginia DCR Guidance for invasive species control measures is available at:  
<https://www.dcr.virginia.gov/natural-heritage/factsheets#invasives>.

The North Carolina Department of Transportation published the Invasive Exotic Plants of North Carolina in 2012, which provides means of control for invasive plants in the state:  
[https://connect.ncdot.gov/resources/Environmental/Compliance%20Guides%20and%20Procedures/Invasive\\_Exotic\\_Plants\\_Manual\\_May\\_2012.pdf](https://connect.ncdot.gov/resources/Environmental/Compliance%20Guides%20and%20Procedures/Invasive_Exotic_Plants_Manual_May_2012.pdf).

The Project will update its Exotic and Invasive Plant Species Control Plan with this information prior to construction.

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**Request:**

**Resource Report 3 – Fish, Wildlife, and Vegetation**

**Vegetation and Wildlife**

17. Pursuant to the February 13, 2019 EIR item #48, specify the acreage of forested habitat that would be cleared within the North Carolina Forest Legacy areas.

**Response submitted March 5, 2019:**

The majority of the construction right-of-way between approximate mileposts (“MP”) 26.1 and 36.3 and MPs 42.2 to 46.0 parallels existing utility right-of-way and crosses a combination of open, agricultural and forest lands. Between approximate MPs 46.0 to 48.4 the construction right-of-way deviates from existing utility right-of-way and crosses forest and open lands. Where the construction right-of-way parallels existing utility right-of-way, the Project expects little to no tree clearing will be required. Where the construction right-of-way is not parallel to existing utility right-of-way and crosses forest land, the Project will reduce forest clearing to the extent practicable.

As stated in Resource Report 3 Table 3.3-2, the Project crosses through the corner of the Piedmont Land Conservancy Easement at MP 37.7 and impacts have been minimized to include only edge habitat. The Project reviewed the easement and determined that a reroute in this area would bring the right-of-way closer to existing residences and result in additional clearing of established forest lands; therefore, a reroute was eliminated from further consideration.

The Project revisited the right-of-way between approximate MP 37.56 to MP 37.7 during February 2019 and took photographs of the existing vegetation along the right-of-way. As indicated in Resource Report 3 the vegetation consists of small saplings, which will be cleared for construction.

**Response Submitted May 13, 2019:**

Acreage of forested habitat that would be cleared within the North Carolina Forest Legacy areas is shown in New Table 17-1 below. The Project crosses the NC Forest Legacy Area between MPs 26.1 and 36.3 and MP 42.2 and 48.4.

<b>New Table 17-1</b>		
<b>North Carolina Forest Legacy Forested Area affected by the MVP Southgate Project</b>		
<b>Legacy Forest Area</b>	<b>Construction Acres</b>	<b>Operational Acres</b>
<b>NC Legacy Forested MP 26.1-36.3</b>		
Forested Deciduous	45.4	18.7
Forested Evergreen	15.8	6.1
Forested Mixed	25.2	9.5
Wetland Forested (PFO)	3.0	1.0
<b>Subtotal</b>	<b>89.4</b>	<b>35.3</b>

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New Table 17-1		
North Carolina Forest Legacy Forested Area affected by the MVP Southgate Project		
Legacy Forest Area	Construction Acres	Operational Acres
<b>NC Legacy Forested MP 42.2-48.4</b>		
Forested Deciduous	42.8	17.1
Forested Evergreen	11.6	4.5
Forested Mixed	5.0	1.8
Wetland Forested (PFO)	0.1	0.0
<b>Subtotal</b>	<b>59.5</b>	<b>23.4</b>
<b>Total</b>	<b>148.9</b>	<b>58.7</b>

Name of Respondent: Mr. Alex Miller  
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**Request:**

**Resource Report 3 – Fish, Wildlife, and Vegetation**

**Endangered, Threatened, and Special Concern Species**

18. Pursuant to the February 13, 2019 EIR items #53 and #57, in regards to American bluehearts, downy phlox, and Piedmont Barbara's-button provide details for the nearest known occurrence which is currently listed as "Unknown" for these species. Provide updated agency consultation with the VADCR regarding these species and other rare plant species and confirm that surveys for these species will be conducted in 2019 as recommended by VADCR in correspondence dated February 26, 2019.

**Response submitted March 5, 2019 EIR #53:**

The requested information, as well as avoidance and minimization measures, are provided in Attachment 53-1.

**Response submitted March 5, 2019 EIR #57:**

The Project will continue to coordinate with VDCR regarding American bluehearts, downy phlox, and Piedmont Barbara's-button. NCNHP provided feedback by email on March 4, 2019 stating that although the pipeline is nearby populations of Cliff Stonecrop (*Sedum glaucophyllum*) in Rockingham County, the proposed work will not impact any known rare plant populations. Updated agency consultations are provided in Attachment 52-2 of Question #52 within this response package.

**Response Submitted May 13, 2019:**

According to VDCR, occurrences of these three species are known from areas near the project and suitable habitat resources and geology to support the species is present near the project. The Project obtained natural heritage spatial data from VDCR for Pittsylvania County and it indicated that there were no records for the above-mentioned species. The Project conducted a desktop assessment of potential habitats and determined that potential suitable habitat for Piedmont Barbara's buttons and downy phlox is present in the portion of the project through Pittsylvania County; however, soil types associated with American bluehearts is limited. On April 23, VDCR recommended surveys for these rare plants species in the existing maintained right-of-way providing open canopy habitat within the project area. The Project intends to conduct surveys for these species in the summer of 2019. Correspondence with VDCR is provided in Attachment 18-1.

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**Request:**

**Resource Report 4 – Cultural Resources**

19. Pursuant to the February 13, 2019 EIR item #66, clearly state the indirect area of potential effect, as conflicting information of a 450-foot-wide corridor centered on the pipeline and a 0.5-mile corridor on each side of centerline has been provided in documentation.

**Response submitted March 5, 2019:**

Resource Report 4 (Section 4.4.2) states “*The indirect effects APE will minimally consist of a 450-foot-wide corridor centered on the pipeline centerline, 250-foot-wide corridors centered on access road centerlines, and an area extending 0.5-mile from the compressor station and meter station sites. The indirect effects APE generally will be terminated 0.5 mile from the pipeline corridor or other Project activity, or where vegetation and/or topography obstructs lines of sight. Figure 4.5-1 (Appendix 4-B) depicts a 0.5-mile radius from all identified Project activities, which generally constitutes the maximum extent of the indirect effects APE.*” [...]

**Response Submitted May 13, 2019:**

The indirect area of potential effect (APE) for the Project is the area in which aboveground historic properties might be subject to visual, audible, vibratory, or atmospheric effects from the Project. To account for auditory, vibratory, and atmospheric effects, the Project established an indirect effects APE that consisted of a 450-foot-wide corridor centered on the pipeline centerline, 250-foot-wide corridors centered on access road centerlines, and an area extending 0.5-mile from the compressor station and meter station sites. Because there is potential for visual effects to occur outside those limits, the indirect effects APE was extended up to 0.5 mile from the pipeline corridor (or other Project activity) in areas where lines of sight were not obstructed by vegetation and/or topography.

Name of Respondent: Mr. Alex Miller  
Title: Environmental Manager  
Phone Number: 713-374-1599



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**Request:**

**Resource Report 4 – Cultural Resources**

20. File copies of the Virginia State Historic Preservation Office (SHPO) reviews of the two archaeological testing reports for Virginia (Millis February 2019; Millis et al March 2019), filed with the FERC on March 28, 2019. Also file copies of the North Carolina SHPO’s reviews of the one addendum survey report (Johnson March 2019) and the one testing report (Millis March 2019) for North Carolina, filed March 28, 2019.

**Response Submitted May 13, 2019:**

The Virginia SHPO’s review of the initial archaeological testing report for Virginia (Millis February 2019) is included in Attachment 20-1. Due to the sensitive nature of the material within this correspondence it is labeled “**CUI//PRIV – DO NOT RELEASE**” in accordance with FERC procedures and 36 CFR Part 800.11(c)(1).

As of May 10, 2019, the Project has not received the Virginia SHPO’s review of the second archaeological testing report for Virginia (Millis et al. March 2019).

The North Carolina SHPO’s review of the addendum survey report (Johnson March 2019) and the initial testing report for (Millis March 2019) is included in Attachment 20-1 and labeled “**CUI//PRIV – DO NOT RELEASE**”.

Name of Respondent: Mr. Alex Miller  
Title: Environmental Manager  
Phone Number: 713-374-1599

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**Request:**

**Resource Report 4 – Cultural Resources**

21. Provide a summary of the total number of miles of pipeline route and the total miles of access roads where inventories have currently been completed, as well as the miles of pipeline route and miles of access roads that remain to be surveyed.

**Response Submitted May 13, 2019:**

As of May 7, 2019, cultural resource surveys have been completed for 67.64 miles of pipeline route and 29.45 miles of access roads. Approximately 6.47 miles of the currently pipeline route and 3.30 miles of access roads remain to be surveyed.

Name of Respondent: Mr. Alex Miller  
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**Request:**

**Resource Report 4 – Cultural Resources**

22. Submit documentation that Mountain Valley provided the Nottoway Indian Tribe of Virginia with copies of all archaeological investigation reports produced to date for the Southgate Project in Virginia, in response to their April 11, 2019 letter to the FERC.

**Response Submitted May 13, 2019:**

On April 23, 2018, the Project contacted the Nottoway Indian Tribe of Virginia (the Tribe) via email expressing the Project's desire to coordinate regarding the Project's cultural resources investigations and supplied a Confidentiality Agreement for the Tribe's signature. As of May 7, 2019, the Tribe returned a call to the Project and informed them that they would be signing the Confidentiality Agreement. Once a signed Confidentiality Agreement is received, the Project will supply the Tribe with copies of all archaeological investigation reports produced to date. The Project has committed to meeting with them to discuss after the Tribe has reviewed the reports. Copies of correspondences are attached as Attachment 22-1.

Name of Respondent: Mr. Alex Miller  
Title: Environmental Manager  
Phone Number: 713-374-1599

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**Request:**

**Resource Report 5 – Socioeconomics**

23. Pursuant to the February 13, 2019 EIR item #87, confirm that Mountain Valley will file all correspondence, including results of its planned meetings, with emergency services within the Project area.

**Response submitted March 5, 2019:**

The Project representatives plan to meet with all fire and police services in the project area to discuss the Project and emergency preparedness. The Project is targeting the summer of 2019 to hold these meetings, after the release of the Draft Environmental Impact Statement. The Project made contact with emergency services to discuss the Project in general. Correspondence with these local entities has been provided in Attachment 87-1.

**Response Submitted May 13, 2019:**

The Project confirms that it will file all correspondences and meeting results related to emergency services within the Project area once available.

The Project has recently made initial contacts with the public safety director of Pittsylvania County, Virginia; the director of emergency services in Rockingham County, North Carolina; the Alamance County, North Carolina Emergency Services and the Alamance County Fire Marshall Office, regarding project-related public emergency response. The Project anticipates coordinating future meetings in Q3 2019 with these offices, among other appropriate county and municipal officials along the proposed route.

Initial correspondences with these offices are filed as Attachment 23-1.

Name of Respondent: Mr. Alex Miller  
Title: Environmental Manager  
Phone Number: 713-374-1599

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**Request:**

**Resource Report 6 – Geology**

24. Pursuant to the February 13, 2019 EIR item #93, as previously requested file a revised Landslide Mitigation Plan that incorporates:

- a. locations where field (geologic mapping and measurements of bedrock bedding attitude) and/or geotechnical investigations would be conducted along the pipeline route to develop site-specific mitigation measures in areas with severe erosion potential, unstable, and/or steep slopes; and
- b. measures that would be implemented in the event that landslide conditions are observed during pipeline construction.

**Response submitted March 5, 2019:**

The Project is currently preparing a Landslide Mitigation Plan that address the concerns identified within the request above. The Project-specific Landslide Mitigation Plan will be submitted within the Supplemental Information Package to be submitted in March 2019.

**Supplemental Response submitted March 28, 2019:**

A Project-specific Landslide Mitigation Report is in Attachment 1-1 of Question #1.c within this supplemental response package.

**Response Submitted May 13, 2019:**

- a. The Project does not intend to conduct additional geotechnical investigations specifically for areas of severe erosion potential, unstable, and/or steep slopes. Right-of-way grading and trenching will serve as sufficient subsurface investigations during construction. Pre-construction geotechnical investigations may create the risk of causing additional issues on steep slopes by disturbing soils and clearing vegetation several months before the start of construction.
- b. The basic strategies to protect against landslides and slope stability along the pipeline corridor in any state of construction include stabilization, drainage improvement, and erosion and runoff control. The standard drawings provided in the Landslide Mitigation Plan address one or more of the strategies and will be implemented in conjunction with the Project-specific Erosion and Sediment Control Plan should landslide conditions be observed. If slope instability occurs during construction, or a problem area is identified that was not described in the Landslide Mitigation Plan, the inspection staff will notify the Project's Construction Management team. Civil inspectors will review the area and utilize the Landslide Mitigation Plan, in conjunction with the Project's Design Engineering team, to develop a solution to implement and reduce landslide probability in the area.

Name of Respondent: Mr. Neil Florentine  
Title: Manager, Design Engineering  
Phone Number: 412-553-5936

**Mountain Valley Pipeline, LLC  
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**Request:**

**Resource Report 6 – Geology**

25. Pursuant to the February 13, 2019 EIR item #100, confirm that no active, proposed, inactive, abandoned, or released surface or subsurface mines were identified within 0.25 mile of the Project area, with the exception of the previously identified kiln plant and the East Alamance Quarry.

**Response submitted March 5, 2019:**

The Project will confirm if any mineral resources are located within 0.25-mile of any aboveground facilities within the Supplemental Information Package to be submitted in March 2019.

**Supplemental Response submitted March 28, 2019:**

Based on review of topographic maps, USGS information and state databases (USGS, 2016a and VDMME, 2018a), no mineral resources are located within 0.25-mile of any aboveground facilities.

No new mineral resources were identified within 0.25 mile of the revised pipeline alignment. There is no change in the Project distance from the sites identified in the Environmental Resource Reports submitted as part of the certificate application (i.e., 0.2 mile from the kiln plant at MP 26.6 and 0.1 mile from the East Alamance Quarry near MP 66.8).

**Response Submitted May 13, 2019:**

The Project confirms that that no active, proposed, inactive, abandoned, or released surface or subsurface mines were identified within 0.25 mile of the Project area, with the exception of the previously identified kiln plant and the East Alamance Quarry.

Name of Respondent: Mr. Neil Florentine  
Title: Manager, Design Engineering  
Phone Number: 412-553-5936

**Mountain Valley Pipeline, LLC  
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**Request:**

**Resource Report 6 – Geology**

26. Pursuant to the February 13, 2019 EIR item #101, clarify the “impacts and inconveniences during operation of the Project” expected to occur at the East Alamance Quarry. Clarify the specific mitigation measures that would be implemented to reduce the anticipated impacts on the quarry during Project construction and operation.

**Response submitted March 5, 2019:**

The Project will provide the distance between workspaces and East Alamance Quarry located near MP 66.8; within the Supplemental Information Package to be submitted in March 2019.

**Supplemental Response submitted March 28, 2019:**

The Southgate Project pipeline alignment is located approximately 0.1 miles from the East Alamance Quarry near MP 66.8 in Haw River, North Carolina. The Project is committed to working with East Alamance Quarry, will adhere to landowner easement agreements, and minimize impacts and inconveniences during operation of the Project. The Project continues to work with the East Alamance Quarry to ensure that there is minimal impact to the quarry to the extent practical. The Project will update the FERC when an agreement is finalized.

**Response Submitted May 13, 2019:**

The Project proposes to adjust the pipeline alignment to adjacent parcels to reduce impacts to any planned and future mining operations at the East Alamance Quarry. With this change in alignment, the Project expects impacts to the Quarry will be reduced. Additionally, temporary access road TA-AL-179A, which was proposed to traverse through the middle of active mining operations, will be removed from the Project footprint in its entirety.

The Project anticipates filing a revised Project footprint by May 24, 2019, which will include mapping to illustrate adjustments to the pipeline alignment and a table to reflect other minor updates to the Project footprint. Included with this information will be proposed route alternatives in the area of the East Alamance Quarry.

Name of Respondent: Mr. Neil Florentine  
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**Request:**

**Resource Report 6 – Geology**

27. Pursuant to the February 13, 2019 EIR item #104, as previously requested identify locations of slopes that would require blasting.

**Response submitted March 5, 2019:**

The potential for landslides along the proposed pipeline route have been rated as slight to moderate by both the USGS and USDA NRCS. Slopes within the “Areas of Potential Blasting by Milepost for Right-Of-Way Grade and Pipeline Trench Excavation” may also be in areas of slope instability. Characteristics of the excavation, rippable, or blasting of the bedrock will be evaluated and applied toward the appropriate excavation method. If force-assisted excavation is needed, it will be confined to the trench excavation and right-of-way alignment. Therefore, blasting will be limited in depth, width, and length to minimize disturbances. The weight of the explosives, delays (type, interval, number of delays, and holes per delay), powder factor, and type of explosive used will be adjusted to achieve a safe blast while managing the transverse, vertical, longitudinal, and peak partial velocities to reduce the energy transferred to the surrounding slopes and mitigate potential slope movement.

**Response Submitted May 13, 2019:**

The potential risk of landslides in the areas corresponding to the proposed MVP Southgate Project alignment is rated slight to moderate based on public domain slope data provided by the U.S. Geological Survey (USGS) and the U.S. Department of Agriculture – Natural Resources Conservation Service (USDA NRCS). The Federal Energy Regulatory Commission (FERC) requested additional information from MVP Southgate regarding potential risk from construction excavation, and particularly force-assisted excavation (FAE) to trigger landslides.

New Table 27-1, below, presents areas of potential FAE by milepost for right-of-way grade and pipeline trench excavation:

New Table 27-1					
From Milepost	To Milepost	Need for FAE			FAE Potential
		Slope	Depth to Bedrock	Rock Type	
0.00	0.95	X			Low
1.20	1.85			X	Low
17.28	33.89	X	X	X	High
34.50	48.23	X	X	X	High
49.29	68.05	X	X	X	High
70.94	72.82	X			Low
Lambert Interconnect and Main Valve		X	X		Low
LN 3600 Interconnect		X	X		Low
T-15 Dan River Interconnect					None
T-21 Haw River Interconnect					None
Mainline Valves		Included within Mainline FAE Potential			



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New Table 27-1 was developed from the following information and assumptions:

- (1) United States Geological Survey (USGS) Geologic Units by Geographic Area. Pittsylvania County, Virginia and Rockingham and Alamance Counties, North Carolina, 2018.
- (2) United States Department of Agricultural, Natural Resources Conservation Service (USDA/NRCS), 2018 Custom Soil Resources Report for Pittsylvania County, Virginia and Rockingham and Alamance Counties, North Carolina.
- (3) “Low” – The potential for FAE is possible within this section depending on depth of and location of planned pipeline and related facilities. The potential of FAE to achieve grade exists but has low probability.
- (4) “High” – FAE will be needed within these sections to achieve grade. FAE will not be continuous.
- (5) Possibility of FAE based on Notes 1 and 2 for this Table and Table 6-F MVP Southgate Project Resource Report 6 – Geologic Resources. FAE based on slope locations where thickness of overlying soil may be less than trench depth due to erosion and gravitational influences on the soil.

New Table 27-2, below, presents areas of potential FAE by milepost for water body crossings (i.e., generally observed to be shallow bedrock):

<b>New Table 27-2</b>							
<b>Areas of Potential FAE for Waterbody Crossings</b>							
State/County	Milepost	Waterbody Name	Need for FAE			FAE Potential	Projected Depth to Bedrock (Inches)
			Slope	Depth to Bedrock	Rock Type		
<b>VIRGINIA</b>							
Pittsylvania	23.0	Tributary to Trotters Creek		X	X	High	24 to 31
	24.4	Tributary to Dan River	X	X	X	High	16 to 20
	24.8	Tributary to Dan River	X	X	X	High	24 to 31
<b>NORTH CAROLINA</b>							
Rockingham	32.5	Tributary to Town Creek	X	X	X	High	10 to 20
	33.7	Tributary to Town Creek		X	X	High	20 to 40
	34.7	Tributary to Town Creek	X	X	X	High	10 to 20
	39.0	Tributary to Wolf Island Creek		X	X	High	10 to 20
	40.4	Tributary to Lick Fork	X	X	X	High	10 to 20
	40.6	Tributary to Lick Fork	X	X	X	High	10 to 20
	40.7	Tributary to Lick Fork	X	X	X	High	10 to 20
	42.9	Tributary to Jones Creek	X	X	X	High	10 to 20
	44.1	Tributary to Jones Creek		X	X	High	10 to 20
	44.1	Tributary to Jones Creek		X	X	High	10 to 20
	45.8	Tributary to Hogans Creek		X	X	High	10 to 20
	45.9	Tributary to Hogans Creek	X	X	X	High	10 to 20
	46.5	Tributary to Hogans Creek	X	X	X	High	10 to 20
	46.5	Tributary to Hogans Creek	X	X	X	High	10 to 20
	47.4	Tributary to Hogans Creek		X	X	High	10 to 20
47.6	Tributary to Hogans Creek		X	X	High	10 to 20	

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New Table 27-2							
Areas of Potential FAE for Waterbody Crossings							
State/County	Milepost	Waterbody Name	Need for FAE			FAE Potential	Projected Depth to Bedrock (Inches)
			Slope	Depth to Bedrock	Rock Type		
Alamance	68.1	Tributary to Boyds Creek	X	X	X	Low	>80
	68.9	Tributary to Haw River	X	X	X	Low	>80
	71.0	Tributary to Haw River	X	X	X	Low	>80
	72.6	Tributary to Haw River	X	X	X	Low	>80

New Table 27-2 was developed from the following information and assumptions:

- (1) United States Geological Survey (USGS) Geologic Units by Geographic Area. Pittsylvania County, Virginia and Rockingham and Alamance Counties, North Carolina, 2018.
- (2) United States Department of Agricultural, Natural Resources Conservation Service (USDA/NRCS), 2018 Custom Soil Resources Report for Pittsylvania County, Virginia and Rockingham and Alamance Counties, North Carolina.
- (3) Possibility of FAE based on Notes 1 and 2 for this Table and Table 6-F MVP Southgate Project Resource Report 6 – Geologic Resources. FAE based on slope locations where thickness of overlying soil may be less than trench depth due to erosion and gravitational influences on soil within the stream channel.
- (4) Waterbodies milepost for water bodies crossed by the pipeline in areas of shallow bedrock for this Table was provided by Revised Table 2.3 – 10 MVP Southgate Project Resource Report 2 – Water Use and Quality.
- (5) “Low” – The potential for FAE is possible within this section depending on pipeline alignment into, across, and out of waterbody. The potential of FAE to achieve the crossing depth exists but has a low probability.
- (6) “High” – FAE will be needed within this section to achieve pipeline alignment into, across, and out of waterbody. FAE will not be needed along the total waterbody crossing length depending on the degree of erosion of the stream banks and stream channel.
- (7) Projected depth to bedrock or depth to restrictive features is based on the United States Department of Agriculture Natural Resources Conservation Service (USDA/NRCS), 2018 Custom Soil Resources Report for Pittsylvania County, Virginia and Rockingham and Alamance Counties, North Carolina for soil unit crossed at water body crossing.

In conclusion, the range in mileposts identified in New Table 27-1 and New Table 27-2 is highly conservative in terms of maximizing the number of locations that may require FAE. Additionally, the data available for populating New Table 27-1 and New Table 27-2 do not present information necessary to assess the potential for FAE to trigger landslides as this analysis.

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MVP Southgate Project will refine the assessment of locations where FAE may be required through further analysis as follows:

- MVP Southgate Project collected LiDAR data along the vast majority of the alignment. The LiDAR data will provide detailed information on slopes. Any slope greater than or equal to 18-degrees (i.e., 3:1 slope) will be identified.
- MVP Southgate Project will compare these slopes with available data on depth to bedrock. Areas along the alignment where bedrock depth is identified to be less than 10 feet below ground surface, and a slope of 18-degrees or more, will be identified and tabulated as a refined list of potential FAE.
- These areas will then be assessed for potential that FAE may trigger landslides.

The refined assessment of potential FAE, and risk for landslides, will be filed with the FERC in an anticipated supplemental filing by May 24, 2019.

It is noted that if and where required, FAE will be conducted by a qualified contractor in accordance with industry-standard practices and the pending Mountain Valley construction services FAE Plan. FAE will be confined to the trench excavation and right-of-way alignment and is intended to enhance conventional excavation techniques (i.e., only used to the extent needed to fracture rock such that conventional mechanical excavation can proceed). FAE will be limited in depth, width, and length to minimize disturbances. The weight of the explosives, delays (type, interval, number of delays, and holes per delay), powder factor, and type of explosive used will be adjusted to achieve a safe blast while managing the transverse, vertical, longitudinal, and peak partial velocities to reduce the energy transferred to the surrounding slopes and mitigate potential slope movement. In this way, the potential for triggering slope failure as a result of FAE will be minimized.

Name of Respondent: Mr. Neil Florentine  
Title: Manager, Design Engineering  
Phone Number: 412-553-5936

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**Request:**

**Resource Report 6 – Geology**

28. Pursuant to the February 13, 2019 EIR item #105, as previously requested describe known concentrations of uranium and radium in soil and groundwater in the Project vicinity (other than the Coles Hill uranium deposit) and discuss the potential for uranium to be exposed or mobilized (into surface water [sedimentation into streams], groundwater, and air [fugitive dust emissions and radiation] during construction in Pittsylvania County, Virginia.

**Response submitted March 5, 2019:**

Potential commercial mining of naturally occurring uranium deposits has been identified in the vicinity of the Project area at Coles Hill, in Pittsylvania County, Virginia. Virginia Uranium, Inc. (“Virginia Uranium”) acquired the Coles Hill Uranium Property (“CHUP”) located on privately controlled lands that hold the mineral rights (BDC, et al., 2009).

In 1979, an exploration drilling program began to map the extent of deposit and the commercially viable amount (by weight) of the deposit. The CHUP was extensively explored through 1984 and was found to consist of high grade naturally occurring uranium at the surface and underground to at least 1,500 feet below ground surface. The veinlet deposits are localized and are hosted within a fault-bounded wedge of gneiss and amphibolite. The total depth of the deposit is not known (untested). Groundwater was not tested and the total mineral rights and leases are approximately 2,296 acres in surface rights (BDC, et al., 2009).

Based on the existing information regarding naturally occurring uranium deposits (and the decay product radium) at Coles Hill located approximately 3.5 miles north of the Lambert Compressor Station, there is no evidence to suggest the excavation required to support the Project will encounter the uranium deposit associated with Coles Hill. Therefore, there is no potential for the Coles Hill uranium deposit to be exposed or mobilized (into surface water [sedimentation into streams], groundwater, and air [fugitive dust emissions and radiation]) because of construction of the Project in Pittsylvania County, Virginia.

**Response Submitted May 13, 2019:**

The Project has continued to evaluate known Naturally Occurring Radioactive Material (NORM) in the Project area. A NORM Report is included in Attachment 28-1 and details about known concentrations of NORMs in the project vicinity. Based on the findings of the analysis, it is concluded that construction activities will not encounter or mobilize NORMs to any greater extent than other construction projects as the Project does not encounter Coles Hill deposit and other NORMs occurrence are consistent with ambient background data for the area.

Name of Respondent: Mr. Neil Florentine  
Title: Manager, Design Engineering  
Phone Number: 412-553-5936

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**Request:**

**Resource Report 6 – Geology**

29. Pursuant to the February 13, 2019 EIR item #111, provide a date for anticipated access and completion of Core Sample No. 2 at the Stony Creek HDD Crossing. If access is not granted, provide a contingency plan to collect necessary geotechnical information for the Stony Creek HDD feasibility analysis.

**Response submitted March 5, 2019:**

Access to the parcel is currently unavailable where Core Sample No. 2 is located. The Project intends to complete the core sample once access to the parcel is granted. Based on the results of Core Sample No. 1, the Project has a high level of confidence in the success of the Stony Creek HDD crossing based on the current design. Once completed, Core Sample No. 2 would be used by the Project to further confirm this determination. An updated Geotechnical report will be provided to the FERC upon completion.

**Response Submitted May 13, 2019:**

The Project has been granted access to the parcel by the landowner (NC-AL-103), however the proposed access to the Project's survey corridor and the proximity to Stony Creek would require extensive tree clearing and grading of a new access road. The landowner expressed concerns about impacting densely-planted pine trees; the landowner's preference is to only build a single access road during construction. Neighboring property, NC-AL-104 has denied survey permission.

If the Project is granted a Certificate, the Project would begin construction on the access road to obtain the core sample prior to starting the crossing. The Project continues to have a high level of confidence in the success of the Stony Creek HDD based on the current design utilizing data from Core Sample No.1 and geotechnical analysis to date.

As a contingency plan, the Project will continue to work with the neighboring landowner (NC-AL-104) to gain access to this area.

Name of Respondent: Mr. Neil Florentine  
Title: Manager, Design Engineering  
Phone Number: 412-553-5936

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**Request:**

**Resource Report 6 – Geology**

30. The discussion provided in the November 6, 2018 Application, section 6.5.4, defines steep slopes as slopes of 30 percent or greater and states that “the Project is currently assessing the Lidar imagery and field verifying areas that may require steep slope construction...the Southgate Project will employ special construction techniques where the slopes typically exceed 30 percent.” However, Mountain Valley’s Landslide Mitigation Report (Attachment 1-1 of the March 28, 2019 supplemental filing) appears to have assessed only slopes of 18 degrees and greater (32 percent). Rectify this apparent discrepancy.

**Response Submitted May 13, 2019:**

The Project initially categorized slopes 30 percent and greater as requiring an assessment for steep slope construction. Additionally, when performing the LiDAR assessment, the Project chose to evaluate slopes 30 percent or greater to account for any margin of error associated with the data collection process. During preparation of the Project’s Landslide Mitigation Report, it was identified that slopes between 30 and 32 percent would not require any additional steep slope construction measures after evaluation was complete using a combination of LiDAR and field verification. Therefore, the Landslide Mitigation Report only includes assessments of slopes 18 degrees (32 percent) or greater.

Name of Respondent: Mr. Neil Florentine  
Title: Manager, Design Engineering  
Phone Number: 412-553-5936

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**Request:**

**Resource Report 8 – Land Use, Recreation, and Visual Resources**

31. The revised table 1.10-2 submitted as part of the March 28, 2019 supplemental filing lists the closest commercial, industrial, residential projects as being 1.5 miles from the Project; however, section 8.3.1 of the November 6, 2018 Application states that “The Project is aware of multiple residential and commercial areas in their early stages of planning or development located within 0.25 mile of the Project.” Clarify the possible discrepancy and provide an updated table that includes those projects within 0.25 miles, as necessary.

**Response Submitted May 13, 2019:**

The residential and commercial areas in their early stages of planning and development mentioned in the November 6, 2018 were mentioned during meetings with local officials in affected municipalities. These projects included the Berry Hill Industrial Park in Pittsylvania County, Virginia, the Granite Mill Project in Alamance, County, North Carolina, and a few other projects that were speculative in nature and not on record with the local planning departments. The Berry Hill Industrial Park and the Granite Mill Project are included in the revised Table 1.10-2 (see Attachment 2-1). Speculative projects mentioned in conversation with local officials and not yet included on town records were not included in the table as no construction timeframe or site mapping was available, and because speculative projects may expire before reaching the planning or permitting stage.

Name of Respondent: Mr. Alex Miller  
Title: Environmental Manager  
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**Request:**

**Resource Report 8 – Land Use, Recreation, and Visual Resources**

32. Pursuant to the February 13, 2019 EIR item # 117, provide the information listed below for site-specific residential construction plans.

- a. A cover page of notes for the residential site-specific construction drawings that includes a description of the following:
  - i. construction procedures (stove pipe, drag, etc);
  - ii. clean-up and revegetation plans;
  - iii. construction duration;
  - iv. landowner communication and landowner complaint measures;
  - v. public safety measures; and
  - vi. dust, noise, and vibration mitigation measures.
- b. If a particular site would require specialized measures or deviations from the general set of standard construction procedures within 25 feet of a residence, provide an annotated residential site-specific construction drawing for that location.
- c. Provide revised residential site-specific construction drawings to include wells, septic systems, and mature trees.
- d. For all residential site-specific drawings, evaluate and describe the feasibility of increasing offsets from project workspaces to at least 25 feet by reducing or shifting the adjacent construction right-of way. If necessary, identify any additional temporary workspace that would be required to safely and efficiently complete installation of the pipeline.
- e. Provide residential construction plans for the following houses:
  - i. House at milepost 16.7 in Pittsylvania County (22 feet from workspace);
  - ii. House at milepost 30.0 in Rockingham County (18 feet from workspace);
  - iii. House at milepost 30.5 in Rockingham County (3 feet from workspace);
  - iv. House at milepost 37.1 in Rockingham County (0 feet from workspace); and
  - v. House at CY01 in Pittsylvania County (0 feet from workspace).
- f. For Drawing Nos. RSS-H650-003, RSS-H650-005, RSS-H650-015, RSS-H650-017, RSS-H650-024, and RSS-H650-025 describe how driveway access would be maintained through the safety fence.
- g. For all locations where Mountain Valley proposes to use a residential driveway as part of an access road or workspace, provide a site-specific drawing, description of the activities that would occur, and measures Mountain Valley would implement to ensure the landowner's use of the driveway is not impeded.
- h. Evidence of landowner concurrence with residential construction plans for residences within 10 feet of project workspaces.



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**Response submitted March 5, 2019:**

The Project will provide site-specific construction plans for all residences listed in Table 8-D within 25 feet of construction workspace, including ATWS, access roads, aboveground facilities, and the pipeline right-of-way. The plans will indicate whether the structures would be removed, relocated, or protected. These revised plans will be provided within the Supplemental Information Package to be submitted in March 2019.

**Supplemental Response submitted March 28, 2019:**

Site-specific construction plans for all residences listed in *Revised Table 8-D – Structures within 50 Feet of the Southgate Project* of Resource Report 2 within 25 feet of construction workspace, including ATWS, access roads, aboveground facilities, and the pipeline right-of-way are provided in updated *Appendix 8-C Site-specific Residential Construction and Mitigation Plans* in Attachment Resource Report 8.

**Response Submitted May 13, 2019:**

Revised site-specific residential construction plans are in Attachment 32-1. The Project has addressed the following items:

- a. A cover page applicable to all residential site-specifics has been included with notes related to items i. through vi.
- b. Any special construction methods have been denoted on the cover page.
- c. Data related to wells, septic systems, and mature trees have been included on the plans if available. The Project team continues to negotiate with landowners and identify wells, septic system, and mature trees through the negotiation process.
- d. The following plans have been adjusted to increase offsets to at least 25 feet. The plans have been included in this filing, despite the increased offset, for completeness.
  - RSS-H650-004 MP 20.20
  - RSS-H650-005 MP 20.25
  - RSS-H650-006 MP 69.80
  - RSS-H650-008 MP 57.80
  - RSS-H650-009 MP 69.10

The Project will continue to review all other residential site-specific plans to determine if offsets can be increased to 25 feet or greater and anticipates filing any other revised residential site specific plans by May 24, 2019. Additionally, changes in workspace will be reflected in the revised Project footprint which is anticipated to be filed by May 24, 2019, which will include mapping to illustrate adjustments to the pipeline alignment and a table to reflect other minor updates to the Project footprint.

- e. Residential construction plans have been provided for items i. through v.
- f. For Drawing Nos. RSS-H650-003, RSS-H650-005, RSS-H650-015, RSS-H650-017, RSS-H650-024, and RSS-H650-025, driveway access will be maintained. Safety fences shown on the drawings will be installed to leave each driveway accessible to the landowner.
- g. The Project has reviewed access roads and identified 31 roads that potentially may be used for private residences and not public roads. The Project is assessing each of these access roads but due to the volume, the Project will provide the requested site-specific plans as part of the anticipated filing by May 24, 2019.
- h. The following table details the current status of negotiations related to construction areas within 10

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feet of a residence:

<b>Residential Site-Specific Plan</b>	<b>Landowner Negotiation Status</b>
RSS-H650-001 MP 49.10	Negotiating – landowner is not concerned with proximity to cabin.
RSS-H650-003 CY-05	Negotiating – residence in question is not occupied.
RSS-H650-017 MP 69.60	Contact has not been made.
RSS-H650-018 MP 69.65	Contact has not been made.
RSS-H650-024 MP 04.50	Acquired.
RSS-H650-026 MP 44.10	Acquired.
RSS-H650-028 MP 67.30	Agreement Pending.
RSS-H650-031 MP 30.50	Negotiating – landowner is not concerned about proximity to structure.
RSS-H650-032 MP 37.10	Acquired – structure is abandoned.
RSS-H650-033 CY-01	Mountain Valley owns parcel and structure.

Name of Respondent: Mr. Alex Miller  
Title: Environmental Manager  
Phone Number: 713-374-1599

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**Request:**

**Resource Report 9 – Air Quality and Noise**

**Air Quality**

33. Pursuant to the February 13, 2019 EIR item #126, provide a summary table to show VOC and CO<sub>2</sub>e emissions separately for blowdown events and fugitive leaks that are not associated with the compressor station (i.e., reported as a combined 4.4 tpy VOC and 4,348 tpy CO<sub>2</sub>e). Include an assessment of hazardous air pollutant (HAP) emissions for each.

**Response submitted March 5, 2019:**

A summary table that provides the volatile organic compound (VOC), CO<sub>2</sub>e, and hazardous air pollutant (HAP) emissions from blowdown events and fugitive leaks at the Lambert Compressor Station is provided in Table 126-1 below.

<b>Table 126-1</b>			
<b>Operational Fugitive Leaks and Blowdown Event Emissions from the Lambert Compressor Station Equipment</b>			
<b>Pollutant</b>	<b>Fugitive Leaks (Tons per Year)</b>	<b>Blowdown Events (Tons per Year)</b>	<b>Total (Tons per Year)</b>
VOC	0.72	0.46	1.18
CO <sub>2</sub> e	1,740.1	1,109.0	2,849.1
HAP (Hexane)	0.03	0.02	0.05

**Response Submitted May 13, 2019:**

A summary table that provides the VOC, CO<sub>2</sub>e, and HAP emissions from blowdown events and fugitive leaks that are associated with the MVP Southgate Project, excluding the Lambert Compressor Station, is provided in New Table 33-1 below. This summary table is based on emission calculations provided in Appendix 9-B, Tables B-10 and B-12 of Resource Report 9 for VOC and CO<sub>2</sub>e. The HAP emissions are based on the natural gas specification provided in Appendix 9-B, Table B-10 and the VOC emissions provided in Table B-12.

<b>New Table 33-1</b>			
<b>Operational Fugitive Leaks and Blowdown Event Emissions from the MVP Southgate Project (Excluding the Lambert Compressor Station)</b>			
<b>Pollutant</b>	<b>Fugitive Leaks (Tons per Year)</b>	<b>Blowdown Events (Tons per Year)</b>	<b>Total (Tons per Year)</b>
VOC	0.2	4.2	4.4
CO <sub>2</sub> e	155	4,193	4,348
HAP (Hexane)	0.01	0.20	0.21

Name of Respondent: Mr. Alex Miller  
Title: Environmental Manager  
Phone Number: 713-374-1599

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**Request:**

**Resource Report 9 – Air Quality and Noise**

**Air Quality**

34. Pursuant to the February 13, 2019 EIR item #127 and information submitted in the March 28, 2019 supplemental filing, provide any recent correspondence that has occurred since February 26, 2019, with the VADEQ regarding the Virginia air permit application and its completeness.

**Response submitted March 5, 2019:**

The Virginia air permit application for the Lambert Compressor Station is currently under technical review by VADEQ after they received a response to their Initial Letter of Determination on December 14<sup>th</sup>. Additional VADEQ correspondence since December 14, 2018 will be provided to the FERC within the Supplemental Information Package to be submitted in March 2019.

**Supplemental Response submitted March 28, 2019:**

Additional VADEQ correspondence since December 14, 2018 is included in Attachment 127-1.

**Response Submitted May 13, 2019:**

A revision to the Virginia air permit application for the Lambert Compressor Station was submitted to the VADEQ on April 25, 2019. This correspondence is included in Attachment 34-1. The application is currently under review.

Name of Respondent: Mr. Alex Miller  
Title: Environmental Manager  
Phone Number: 713-374-1599

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**Request:**

**Resource Report 9 – Air Quality and Noise**

**Noise**

35. Pursuant to the February 13, 2019 EIR item #129, provide an assessment of the applicability to the Pittsylvania County Noise Ordinance for the following activities:

- a. 24-hour construction of the Lambert Compressor Station/Interconnect; 24-hour construction of Railroad Crossings 1 and 2;
- b. Maintenance blowdown at the Lambert Compressor Station; and
- c. Emergency shutdown of the Lambert Compressor Station.

If applicable, include the calculated noise level at the property line of the noise-sensitive area (NSA) and compare to the associated limit to assess compliance. Include mitigation measures as needed.

**Response submitted March 5, 2019:**

The Project will continue to coordinate with Pittsylvania County to discuss the county noise ordinance's applicability to Project facilities and activities. Project representatives have met with County officials in December 2018 and the Project plans to meet with County officials again in March 2019.

**Supplemental Response submitted March 28, 2019:**

The Project continues its discussion with Pittsylvania County officials and will provide information on meeting results once available.

**Response Submitted May 13, 2019:**

The Project has completed noise modeling related to activities EIR# items 35 a. through c. The Project continues to discuss applicability of the Pittsylvania County Ordinance with county officials, including a meeting as recent April 10, 2019. After discussions conclude, the Project will provide additional information.

Name of Respondent: Mr. Neil Florentine  
Title: Manager, Design Engineering  
Phone Number: 412-553-5936

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**Request:**

**Resource Report 9 – Air Quality and Noise**

**Noise**

36. Pursuant to the February 13, 2019 EIR item #132, provide estimated day-night sound level (Ldn) noise levels from an emergency blowdown event at the nearest NSAs in order to compare against the FERC 55 A-weighted decibels (dBA) Ldn limit (or Ln (percentile noise level) if worst case similar to compressor station maintenance blowdowns/venting as provided in RR 9). Also provide the noise levels for the emergency shutdown event plus ambient and the increase of ambient. Indicate whether a silencer would be utilized during such events.

**Response submitted March 5, 2019:**

There are three separate vents that would be used during an emergency shutdown event: discharge, suction, and fuel gas vents. The sound power level of each vent was calculated using the upstream pressure, upstream temperature, mole weight of the gas, and the inside diameter of the vent pipe. The estimated total A-weighted sound power levels of the discharge, suction, and fuel gas vents are 138, 133, and 120 dBA, respectively.

A noise model of the Lambert Compressor Station site was used to estimate the sound levels at the closest NSAs during an Emergency Shutdown (ESD) event. Table 132-1, below, summarizes the predicted sound levels at the NSAs during the ESD event. The highest sound levels are developed during only the first few seconds of ESD venting, during the period with the highest upstream pressure. The venting sound levels drop quickly over the ten-minute venting period as the upstream pressure decreases. For instance, when the upstream pressure drops by 50%, the ESD venting sound levels drop by 6 decibels. We have used the conservative estimate that the 10-minute Leq will be approximately 5 decibels lower than the L<sub>max</sub>. This is a conservative assumption, and it is likely that the 10-minute sound level will be lower than indicated in Table 132-1.

Table 132-1				
NSA	Distance from Compressor Station to NSA, feet	Direction from Station to NSA	Highest Expected Sound Level Due to an ESD Event, L <sub>max</sub> dBA	10-minute Average Sound Level of an ESD Event, Leq, dBA
1	3,480	WSW	63.9	58.9
2	3,500	SW	63.4	58.4
3	3,290	SE	56.1	51.1
4	3,800	N	55.5	50.5

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**Response Submitted May 13, 2019:**

New Tables 36-1 and 36-2, below, show the predicted sound level increase in the 10-minute  $L_{eq}$  and 24-hour  $L_{dn}$ , respectively, due to an emergency shutdown event (ESD) at the Lambert Compressor Station site. There is no silencer planned for the emergency shutdown vent. As discussed in Resource Report 9, the emergency shutdown is intended to function as an alarm to notify nearby residents of a potential emergency. These events are extremely rare and take place only in the event of an emergency or when the system is tested once every year. Residents will be notified in advance of the annual ESD system test.

As shown in New Table 36-1, an ESD event is expected to cause a short-term increase in the 10-minute  $L_{eq}$  of between 1.5 and 18.2 dBA. By design, the event would be expected to be clearly audible at the closest NSAs. The predicted 10-minute sound levels at the NSAs range from 50.5 to 58.9 dBA. While these sound levels would be expected to be clearly audible, they are not high enough to cause any adverse effects on human hearing.

Due to the short duration of the ESD event, a single event during a given day will have a small impact on the 24-hour day-night sound level ( $L_{dn}$ ) for any of the NSAs. The increase in the  $L_{dn}$  for a day with an ESD event ranges from 0.0 to 1.6 dBA, as shown in Table 36-2.

<b>New Table 36-1</b>						
<b>Predicted Sound Level Impact of an ESD Event on the 10-minute <math>L_{eq}</math></b>						
<b>NSA</b>	<b>Distance from Compressor Station to NSA, feet</b>	<b>Direction from Station to NSA</b>	<b>Measured Night Average, <math>L_{eq}</math> dBA</b>	<b>10-minute <math>L_{eq}</math> of an ESD Event, <math>L_{eq}</math> dBA</b>	<b>10-minute <math>L_{eq}</math> during an ESD Event (Ambient + Event Level), <math>L_{eq}</math> dBA</b>	<b>Potential Increase in 10-minute <math>L_{eq}</math></b>
1	3,480	WSW	40.8	58.9	59.0	18.2
2	3,500	SW		58.4	58.5	17.7
3	3,290	SE	55.1	51.1	56.6	1.5
4	3,800	N	38.4	50.5	50.8	12.4

<b>Table 36-2</b>							
<b>Predicted Sound Level Impact of an ESD Event on the 24-hour <math>L_{dn}</math></b>							
<b>NSA</b>	<b>Distance from Compressor Station to NSA, feet</b>	<b>Direction from Station to NSA</b>	<b>Measured 24-hour Day Night Sound Level, <math>L_{dn}</math> dBA</b>	<b>10-minute <math>L_{eq}</math> of an ESD Event, <math>L_{eq}</math> dBA</b>	<b><math>L_{dn}</math> for Single ESD Event, <math>L_{dn}</math> dBA</b>	<b><math>L_{dn}</math> for a day with an ESD Event (Ambient + Event Level), <math>L_{dn}</math> dBA</b>	<b>Increase in the <math>L_{dn}</math> due to a Single ESD Event, dBA <math>L_{dn}</math></b>
1	3,480	WSW	50.7	58.9	47.3	52.3	1.6
2	3,500	SW		58.4	46.8	52.2	1.5
3	3,290	SE	64	51.1	39.5	64.0	0.0
4	3,800	N	56.4	50.5	38.9	56.5	0.1

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Name of Respondent: Mr. Neil Florentine  
Title: Manager, Design Engineering  
Phone Number: 412-553-5936



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**Request:**

**Resource Report 10 – Alternatives**

37. Pursuant to the February 13, 2019 EIR item #133, provide documentation that Mountain Valley is working with Mr. Robert Pollack to further reduce impacts to agricultural operations on his property.

**Response submitted March 5, 2019:**

As discussed in Resource Report 10, Section 10.6.1, based on initial review the Project did not identify disadvantages that would outweigh the advantages of incorporating the Robert Pollock-Hill Farms Variation (see Section 10.6.1). The disadvantages of the variation include the potential demolition of a house and limited work area between a private drive, waterbody (pond), and structures along the variation.

The preferred pipeline route and the Robert Pollock-Hill Farms Variation are equivalent in length and cross similar land uses (see Resource Report 1, Figures 10.6-1 and 10.6-1a). While the preferred pipeline route and the Robert Pollock-Hill Farms Variation are similar, the preferred route eliminated the need for approximately 1,300 feet of access road and approximately 0.3 acre of additional temporary workspace. As a result of these impacts, the Robert Pollock-Hill Farms Variation was not incorporated into the Project pipeline route.

**Response Submitted May 13, 2019:**

The Project continues to meet with Mr. Robert Pollok to refine the project footprint and reduce impacts on the property. Since March 1, 2019, the Project has had several distinct communications with Mr. Pollok including a meeting on April 23, 2019 at the property. Details of relevant correspondence are included in Attachment 37-1. Due to the sensitive nature of the material within this correspondence it is labeled “CUI//PRIV – DO NOT RELEASE” in accordance with FERC procedures and 36 CFR Part 800.11(c)(1).

The Project has incorporated several of Mr. Pollok’s requests for changes that will reduce the overall impact to agricultural operations.

The Project anticipates filing a revised Project footprint by May 24, 2019, which will include mapping to illustrate adjustments to the pipeline alignment and a table to reflect other minor updates to the Project footprint.

Name of Respondent: Mr. James Sabol  
Title: Project Manager  
Phone Number: 412-395-3597

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**Request:**

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38. Pursuant to the February 13, 2019 EIR item #137, provide an analysis of route variations that would avoid or reduce impacts to the site where they are planning to construct a new home and install a septic system or specify how Mountain Valley would minimize/mitigate impacts on this new planned home site.

**Response submitted March 5, 2019:**

The Project is evaluating a route variation that would avoid Mr. and Mrs. Shambley's property. The Project will provide an analysis of this variation within the Supplemental Information Package to be submitted in March 2019.

**Supplemental Response submitted March 28, 2019:**

An analysis of a route variation that would avoid Mr. and Mrs. Shambley's property is in Attachment Resource Report 10.

**Response Submitted May 13, 2019:**

The Project continues to evaluate areas of concern on Mr. and Mrs. Shambley's property related to construction of a home and septic system. Attachment 38-1 contains a figure and an analysis of two route variations the Project considered to minimize/mitigate impacts at this location. One variation avoids the Shambley property almost entirely but impacts neighboring landowners; the second variation attempts to minimize impacts to the assumed location of the house construction and septic system. Previous route variations analyzed are superseded by the variations shown in Attachment 38-1. At the time of this filing, the Project has not been granted permission to survey the property to better obtain information related to the construction of the house and septic system but continues to work with Mr. and Mrs. Shambley and anticipates completing surveys in the summer of 2019. The Project will continue to work with the landowner on minimizing impacts to the Shambley property.

Name of Respondent: Mr. James Sabol  
Title: Project Manager  
Phone Number: 412-395-3597

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**Request:**

**Resource Report 10 – Alternatives**

39. Provide an analysis of a system alternative that would incorporate the planned Transco Appalachian Connector Project.

**Response Submitted May 13, 2019:**

The Transco Appalachian Connector Project was erroneously included in cumulative impacts in Resource Report 1, Figure 1.10-1; in Figure 19-1 of the Project's March 5, 2019 responses to Environmental Information Request #1, and in revised Table 1.10-2 of the Project's March 28, 2019 Supplemental Filing. The Appalachian Connector Project has not entered the pre-filing or certificate process with FERC, and Williams' company webpage does not provide any information on the project. This project is entirely speculative and thus is not a reasonably foreseeable project for NEPA purposes.

Name of Respondent: Mr. James Sabol  
Title: Project Manager  
Phone Number: 412-395-3597

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**Request:**

**Resource Report 10 – Alternatives**

40. In response to Mr. Henry Strader Jr., Mr. Garry Strader, and Ms. Sandra Strader comments submitted to the FERC Project Docket on July 3, 2018, provide an analysis of a route variation that would avoid or reduce impacts on the groundwater well and septic system on their property.

**Response Submitted May 13, 2019:**

The Project has adopted a route modification on the Strader property that addresses issues related to groundwater wells and septic systems (see Figure 40-1 in Attachment 40-1). The Project team was recently able to meet on site with the property owners to accurately locate the facilities.

The Project anticipates filing a revised Project footprint by May 24, 2019, which will include mapping to illustrate adjustments to the pipeline alignment and a table to reflect other minor updates to the Project footprint.

Name of Respondent: Mr. James Sabol  
Title: Project Manager  
Phone Number: 412-395-3597

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**Request:**

**Appendix 1-A Alignment Sheets**

41. Based on revised alignment sheets provided in the March 28, 2019 supplemental filing, adjust ATWS at the following locations:

- a. ATWS #1001E at Lambert CS – adjust workspace to existing open land to limit tree clearing;
- b. ATWS #1035 at MP 3.5 – adjust ATWS to existing open land to reduce tree clearing;
- c. ATWS #1088 at MP 9.75 - adjust ATWS to existing open land to reduce tree clearing;
- d. ATWS #1118A at MP 14.75 - adjust ATWS to open land to reduce tree clearing;
- e. ATWS #1213A – adjust ATWS to 50 feet from the wetland;
- f. ATWS #1213C – adjust ATWS in this area to remove ATWS within wetland;
- g. ATWS #1213D – reduce ATWS with wetland to reduce wetland impacts
- h. ATWS #1244 and 1244a at MP 30 Dan River HDD - adjust ATWS to move at least 50 feet from wetland boundary.

**Response Submitted May 13, 2019:**

- a. ATWS #1001E has been reduced.
- b. ATWS #1035 has shifted north to avoid tree clearing impacts. Survey data from the parcel denotes actual tree canopy line. ATWS is located outside of tree clearing despite aerial imagery.
- c. ATWS #1088 abuts surveyed tree canopy line. No additional clearing is required despite aerial imagery.
- d. ATWS #1118A has been relocated to the west side of the pipeline alignment. It will be trimmed to match surveyed tree canopy line in the new location.
- e. The pipeline alignment in this area has been modified after a field meeting with Williams Transco to determine feasibility of crossing their facilities. The crossing location has shifted approximately 230 feet to the southwest along the current alignment. Due to the new location of this crossing, ATWS has been adjusted in size and layout, but 1213A cannot be moved 50 ft. outside of the wetland as it will be required for safe crossing of the Williams Transco facilities.
- f. ATWS# 1213C has been removed from the project footprint.
- g. ATWS# 1213D has been modified to 100 ft. by 150 ft. to reduce impacts in the wetland. The location of the ATWS is located entirely within actively cultivated areas.
- h. ATWS #1244 and 1244A can be adjusted to be outside of the wetland boundaries. Due to the HDD of the Dan River and other environmentally sensitive resources identified in the area, the location of the ATWS in this area is unable to be modified, including the 25 ft. by 800 ft. area required for pipe pullback area. Surrounding land use at this wetland location consists of actively cultivated lands.

Attachment 41-1 illustrates changes to the aforementioned ATWS.

Name of Respondent: Mr. Neil Florentine  
Title: Manager, Design Engineering  
Phone Number: 412-553-5936