

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

General

1. File copies of, or provide an anticipated submittal date for all outstanding plans and studies that Mountain Valley indicated were pending, such as, but not limited to:

- a. Project-specific Erosion and Sediment Control Plan (E&SCP) in compliance with Virginia and North Carolina erosion control regulations;
- b. Compensatory Wetland Mitigation Plan;
- c. Landslide Mitigation Plan;
- d. Emergency Response Plan; and
- e. Fugitive Dust Control Plan.

Response:

- a. The Project is currently preparing project-specific Erosion and Sediment Control Plans for compliance with Virginia and North Carolina erosion control regulations that will be submitted to state agencies for their respective reviews in April 2019.
- b. Prior to construction, the Project will provide an updated compensatory mitigation plan (letters of available credit in Virginia and North Carolina are shown in Attachment 1b-1) for permanent fill of wetlands and permanent conversion of forested wetlands to scrub-shrub or emergent wetlands. The amount of compensatory mitigation will be developed in accordance with state-specific regulatory requirements once the Project design is finalized and permanent fill / conversion acreages are calculated. While the Project currently plans to purchase credits from approved mitigation banks in both states, the Project will also consider acquiring compensatory mitigation through the North Carolina Division of Mitigation Services for impacts in North Carolina if there are not enough appropriate private mitigation bank credits available. Letters documenting wetland mitigation credit availability in both states are provided in Attachment 1b-1 – Wetland Mitigation Credit Availability Letters.
- c. The Project is currently preparing a Landslide Mitigation Plan that will be submitted within a Supplemental Information Package in March 2019.
- d. The initial Emergency Plan for the MVP Southgate Project is included in Attachment 1d-1. This Emergency Plan is in draft form and will continue to be revised and populated with applicable information up until the Project is in service. If requested, the Project can file the revised Emergency Plan with FERC prior to placing the Project in service.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

- e. As described in the table *FERC Comments on Draft Resource Report 9 [Dated: October 5, 2018]* provided in Resource Report 1, the fugitive dust control measures are described in Section 9.2.6 of Resource Report 9. The Project does not intend to draft a separate *Fugitive Dust Control Plan*.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

2. Regarding proposed contractor yards, provide the following information listed below.
 - a. Indicate the status of negotiations for landowner permission. Identify any issues that have been raised by landowners in opposition to placement of contractor yards and how those issues are being resolved.
 - b. Table 1.3-4 indicates extensive forested land is proposed to be cleared at contractor yards CY-01 (31.7 acres), CY-03 (4.2 acres), CY-07 (1.0 acre), and CY-09 (4.7 acres). If each contractor yard site cannot be configured to avoid forested impacts, provide site-specific justification for the clearing of forested areas at each of sites.
 - c. Evaluate alternative areas to place contractor yards that would avoid sensitive areas/resources (e.g. forest, environmental justice communities, public recreational areas, places of worship, etc.).

Response:

- 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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

3. Provide site-specific justification for proposed additional temporary workspace (ATWS) located at the base of access roads where they intersect with the right-of-way, specifically where these ATWS areas are located within wetlands or forested areas.

Response:

Site-specific justification for proposed ATWS located at the base of access roads where they intersect with the right-of-way is provided in Table 3-1 below.

Table 3-1 Site Specific Justification for Additional Temporary Workspace			
Access Road	ATWS ID	Milepost	Justification
TA-PI-007	1047	4.6	Staging for storage of materials and turn around.
TA-PI-009	1048	4.8	Staging for materials, equipment and timber mat storage for pipeline crossing.
TA-PI-011	1051	5.1	Staging for storage of materials and timber for wetland crossing.
TA-PI-016	1056	5.9	Staging for materials, equipment and timber mats for pipeline crossing.
TA-PI-018	1064	6.8	Staging for timber mats for pipeline crossing.
TA-PI-021	1078	8.2	Area for storage and turn around for large trucks.
TA-PI-024	1084	9.1	Staging for storage of materials and timber mats for wetland and stream crossing.
TA-PI-034	1115	13.7	Staging and storage of materials (e.g. pipe and fittings) and turn around for delivery trucks.
TA-PI-038	1124	15.8	Staging and storage of materials and timber mats for stream crossing and PI. Also, for pipe storage.
TA-PI-039	1126	16	Staging for materials, equipment, and timber mats for stream crossing and Mt. Cross Church Road crossing.
TA-PI-046	1140	18	Staging and storage of materials, timber mats and equipment for stream crossing.
TA-PI-052	1160	20.4	Staging and storage of materials, timber mats and equipment for stream crossing.
TA-PI-055	1168	21.65	Staging and storage of materials (e.g. pipe) and timber mats for pipeline crossing.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Table 3-1 Site Specific Justification for Additional Temporary Workspace			
Access Road	ATWS ID	Milepost	Justification
TA-PI-061	1178	23	Staging and storage of materials and timber mats for foreign pipeline crossing.
TA-PI-063	1190	24.1	Area for material storage and turn around for large trucks.
TA-PI-064	1193	24.6	Area for material storage and turn around for large trucks.
TA-PI-066	1195	24.8	Area for material storage and turn around for large trucks.
TA-PI-067	1198	25.1	Area for material storage and turn around for large trucks.
TA-PI-068	1205	26	Area for material storage and turn around for large trucks.
TA-RO-070	1206	26.2	Staging for storage of equipment, materials and timber mats for wetland crossing and Buffalo Road crossing.
TA-RO-076	1232	28.6	Staging and storage of materials, equipment and timber mats for pipeline crossing. Also used for pipe storage.
TA-RO-078	1239	29.2	Staging and storage of materials, equipment and timber mats for pipeline crossing.
TA-RO-079	1242	29.6	Staging and storage of materials, equipment and timber mats for pipeline crossing. Area may also be used for contractor parking.
PA-RO-082	1249	30.4	Staging and for materials, equipment and drill support Area may also be used for contractor parking.
TA-RO-087	1271 , 1272	32.8	Staging and storage of materials, equipment and timber mats for PI work and pipeline crossing. Area may also be used for contractor parking.
TA-RO-088	1282	33.6	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
TA-RO-089	1287	34.1	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
TA-RO-092	1300	35.4	Staging and storage of materials, equipment and timber mats for PI work and pipeline crossing. Area may also be used for contractor parking.
TA-RO-094	1302	35.9	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
TA-RO-095	1305	36.15	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
TA-RO-099	1315	36.7	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
TA-RO-102	1324	37.6	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Table 3-1 Site Specific Justification for Additional Temporary Workspace			
Access Road	ATWS ID	Milepost	Justification
TA-RO-103	1328	38	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
TA-RO-104	1334	38.55	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
TA-RO-106	1339	38.9	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
TA-RO-108	1334	39.6	Staging and storage of materials and equipment near stream crossing.
PA-RO-109	1347	39.7	Staging and storage of materials, equipment for PI work and bore at railroad.
TA-RO-111	1363	40.9	Staging and storage of materials, equipment and turn around for large trucks.
TA-RO-112	1367	41.4	Staging and storage of materials, equipment and turn around for large trucks.
TA-RO-115	1379	42.4	Staging and storage of materials, equipment and turn around for large trucks.
TA-RO-115A	1385	43.15	Staging and storage of materials, equipment for bore of Brooks Road. Also allows for safer entry and exit onto Brooks Road.
TA-RO-118	1392	43.4	Staging and storage of materials and equipment for road crossing.
TA-RO-117	1390	43.4	Staging and storage of materials and equipment for road crossing.
TA-RO-119	1397	43.9	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking.
TA-RO-122	1403	44.1	Staging and storage of materials, equipment and timber mats for wetland crossings.
TA-RO-124	1408	44.8	Staging and storage of materials, equipment for PI work and power line crossing.
TA-RO-130	1432	47.3	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking
TA-RO-133	1447	48.6	Staging and storage of materials, equipment and timber mats for wetland crossings.
TA-RO-135	1454	49.2	Staging and storage of materials, equipment and timber mats for wetland crossings. Also will be utilized for large truck turnaround and employee parking.
TA-RO-138	1460	49.8	Staging and storage of materials, equipment and turn around for large trucks.
TA-RO-139	1463	50.3	Staging and storage of materials, equipment and turn around for large trucks. Area may also be used for contractor parking
TA-RO-140	1466	51.4	Staging and storage of materials, equipment and timber mats for wetland crossing. Area may also be used as turnaround for large trucks.
TA-RO-144	1474	52.2	Staging and storage of materials, equipment and timber mats for wetland crossing. Area may also be used as turnaround for large trucks.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Table 3-1 Site Specific Justification for Additional Temporary Workspace			
Access Road	ATWS ID	Milepost	Justification
TA-RO-145	1475	52.3	Staging and storage of materials, equipment and timber mats for wetland crossing. Area may also be used as turnaround for large trucks
TA-AL-147	1484	53	Staging and storage of materials and equipment for road crossing.
TA-AL-149	1486	53.3	Staging and storage of materials and equipment for road crossing.
TA-AL-153	1493	53.75	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks.
TA-AL-156	1511	55.5	Staging and storage of materials, equipment and timber mats for wetland crossing.
TA-AL-161	1535	57.75	Staging and storage of materials, equipment and turn around for large trucks.
PA-AL-164	1546	58.8	Staging and storage of materials, equipment and turn around for large trucks.
TA-AL-171	1582	63.4	Staging and storage of materials and equipment for HDD. Area may also be used as turnaround for large trucks.
TA-AL-172	1584	63.7	Staging and storage of materials and equipment for HDD. Area may also be used as turnaround for large trucks.
TA-AL-179A	1588W	66.7	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks and contractor parking.
TA-AL-180	1588Z	67.3	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks and contractor parking.
TA-AL-187	1653	69.5	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks.
TA-AL-188	1670	70.9	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks and contractor parking.
TA-AL-189	1676	71.2	Staging and storage of materials, equipment and timber mats for road crossing.
TA-AL-192	1686	72.2	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks.
TA-AL-193	1688	72.4	Staging and storage of materials, equipment and timber mats for stream crossing. Area may also be used as turnaround for large trucks and contractor parking.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

4. Provide the exact location and type of groundbeds for cathodic protection. Table 1.3-3 states that: “Testing for suitability of groundbed locations is ongoing,” and “Final groundbed locations will be determined prior to the commencement of construction.” If that information is currently undetermined, then provide a schedule for the filing of information about the exact locations and types of groundbeds and impacts associated with each location.

Response:

At this time, final groundbed locations have not been determined. The first round of testing for groundbed suitability has concluded, but based on the results, testing of additional locations is required. Final groundbed locations will be determined upon completion of a second round of testing, to be completed in the March/April 2019 timeframe and will be filed with the Commission, targeting June 2019. The Project does not anticipate additional environmental impacts beyond what was filed in Section 1.3.2 of Resource Report 1 in November 2018.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

5. Update table 1.7-1 to indicate the current status of all required federal, state, and local government permit applications and approvals. Include the date Mountain Valley submitted or would submit the application and indicate whether a permit was issued or its pending schedule.

Response:

At the time of this filing, the Project has not received any permits for the project. Table 1.7-1 has been updated below to indicate the current status of federal, state, and local government permit applications and approvals. Not all permits listed are required by Federal Law.

REVISED Table 1.7-1 Anticipated Permits and Consultations for the MVP Southgate Project			
Agency	Permit/ Approval/ Consultation <u>a/</u>	Submittal Date or Anticipated Submittal/ Initiation Date	Anticipated Permit Receipt/ Completion Date
Federal			
Federal Energy Regulatory Commission	Natural Gas Act, Section 7; Certificate for construction and operation of interstate natural gas pipeline.	Submitted November 6, 2018	December 2019
U.S. Army Corps of Engineers Norfolk District Wilmington District	Section 404 Permit for impacts on waters of the U.S., including wetlands	Submitted November 30, 2018	December 2019
U.S. Fish and Wildlife Service Virginia North Carolina	Consultation under Section 7 of ESA for potential impacts on federally protected species Consultation regarding impacts on migratory birds and eagles	May 2018	September 2019
Virginia			
Virginia Department of Historic Resources, Division of Review and Compliance (“SHPO”)	Consultation and clearance regarding potential impacts on pre-historic and historic resources eligible for listing on	May 2018	December 2019

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

**Responses to Environmental Information Request
Dated February 13, 2019**

REVISED Table 1.7-1 Anticipated Permits and Consultations for the MVP Southgate Project			
Agency	Permit/ Approval/ Consultation <u>a</u>/	Submittal Date or Anticipated Submittal/ Initiation Date	Anticipated Permit Receipt/ Completion Date
	the National Register of Historic Places		
Virginia Marine Resources Commission	Permit for encroachment to state-owned subaqueous lands	November 30, 2018	December 2019
Virginia Department of Environmental Quality ("VDEQ"), Water Division	Section 401 Water Quality Certification and Water Protection Permit for impacts to non-404 regulated wetlands or waters	November 30, 2018	December 2019 (Automatic under Nationwide Permit 12)
VDEQ, Water Division	Virginia Pollution Discharge Elimination System (VPDES) permit for discharge of construction stormwater	March 2019	December 2019
VDEQ, Water Division	General Permit No. VAG83 (Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests GP)	Covered under General Permit Conditions	
VDEQ, Air Division	VADEQ Article 6 Minor New Source Air Quality Permit	November 8, 2018	July 2019
Virginia Department of Conservation and Recreation, Division of Natural Heritage	Consultation for state threatened and endangered species	May 2018	March 2019
Virginia Department of Game and Inland Fisheries	Consultation for state protected wildlife species	May 2018	September 2019
Virginia Department of Transportation	Road bonds and crossing permits	August 2019	October 2019
North Carolina			
North Carolina Department of Environmental Quality ("NCDEQ"), Division of Water Resources	401 Water Quality Certification, Isolated/non-404 wetlands and water permit	November 30, 2018	September 2019
North Carolina Department of Environmental Quality ("NCDEQ"), Division of Water Resources	Jordan Lake Watershed Major Variance	February 8, 2018	May 2019
NCDEQ, Division of Energy, Mineral and Land Resources	General Permit NCG010000 to discharge stormwater under the NPDES for Construction Activities	April 2019	August 2019

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

**Responses to Environmental Information Request
Dated February 13, 2019**

REVISED Table 1.7-1 Anticipated Permits and Consultations for the MVP Southgate Project			
Agency	Permit/ Approval/ Consultation <u>a/</u>	Submittal Date or Anticipated Submittal/ Initiation Date	Anticipated Permit Receipt/ Completion Date
NCDEQ, Natural Heritage Program	Consultation for state threatened and endangered species	May 2018	March 2019
North Carolina Wildlife Resources Commission	Consultation for state threatened and endangered species	May 2018	September 2019
North Carolina Department of Cultural Resources ("SHPO")	Consultation and clearance regarding potential impacts on pre-historic and historic resources eligible for listing on the National Register of Historic Places	May 2018	December 2019
North Carolina Department of Transportation	Road bonds and crossing permits	June 2019	December 2019
<u>a/</u> Consultations will occur continuously throughout the development of the Project.			

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

6. Clearly state whether or not Mountain Valley would participate in FERC's third-party construction compliance monitoring program.

Response:

The Project will participate in the FERC's third-party construction compliance monitoring program.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

7. Provide the number of Environmental Inspectors (EI) expected to be used per spread.

Response:

The Project is currently proposing to use up to 4 environmental inspectors (EI) per spread. The final number of environmental inspectors will be determined prior to construction and submitted as part of the Project's Implemental Plan.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

8. Provide a specific construction schedule for Spread 1, Spread 2, and the Lambert Compressor Station.

Response:

Construction schedules for Spread 1, Spread 2 and the Lambert Compressor Station are included in Attachment 8-1 –Construction Schedules. An updated schedule will be provided within the Project's Implementation Plan in accordance with the standard conditions of a Certificate of Public Convenience and Necessity.

Name of Respondent: Jim Sabol
Title: Project Manager
Phone Number: 412-395-3597

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

9. Provide the workforce size anticipated for the Lambert Compressor Station.

Response:

The Project anticipates a peak workforce size of approximately 110 personnel for the Lambert Compressor Station.

Name of Respondent: Mr. Klete Kutrovac
Title: Director of Construction
Phone Number: 724-271-7457

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

10. Provide the following regarding non-jurisdictional electric utility facilities associated with the Project:

- a. clarify the primary source of electric power at the Lambert Compressor Station and confirm if commercial service would be purchased resulting in the construction of additional powerlines to the station; and
- b. describe the full impacts of potentially using solar power to supply electric power to the mainline valves (MLV), interconnect/meter stations, and cathodic protection sites as Mountain Valley stated in section 1.2.2.5 of RR1.

Response:

- a. Primary power will be provided by microturbines (i.e. natural gas powered generators) and commercial power will be purchased as a backup power source. Approximately 500 feet of new power lines will be built to provide secondary commercial service to the Lambert Compressor Station.
- b. Solar power cannot practically meet the electrical demand and reliability required for interconnect/meter stations and cathodic protection sites. Solar power is the preferred power source for MLVs when commercial power is not readily available or practical. In the event that MLV sites do not have practical access to electrical service, the use of solar power will have no incremental environmental impact.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

Cumulative Impacts

11. Clarify which geographic scopes (or regions of influence) were used to identify the projects listed in table 1.10-2. If the geographic scopes requested by FERC staff in pre-filing comments on draft RR1, dated October 5, 2018, were not used, revise table 1.10-2 to include projects consistent with staff's aforementioned request.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

Cumulative Impacts

12. Include the information below in the revised table 1.10-2:

- a. the hydrologic unit code (HUC)-12 watershed that the identified project shares with the Southgate Project, and:
 - i. total acreage affected by the project within that shared HUC-12 watershed;
 - ii. acreage of forest cleared within the shared HUC-12 watershed where the Southgate Project affects forest; and
 - iii. acreage of wetlands (palustrine forested [PFO], palustrine scrub-shrub [PSS], and palustrine emergent [PEM]) affected within the shared HUC-12 watershed where the Southgate Project affects wetlands.
- b. the HUC-10 watershed that the identified project shares with the Southgate Project, and:
 - i. total acreage affected by the project within that shared HUC-10 watershed; and
 - ii. number of waterbodies crossed within the shared HUC-10 watershed where the Southgate Project affects waterbodies.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

Cumulative Impacts

13. Provide a table that lists each HUC-12 watershed affected by the Southgate Project, and include the information below for each watershed:

- a. acres of forest, wetlands (PFO, PSS, PEM), and total acreage affected by the Southgate Project (permanent and temporary impacts);
- b. acreage of forest, wetlands (PFO, PSS, PEM), and total acreage affected by the projects combined in each HUC-12 watershed (permanent and temporary impacts) for all relevant projects identified in table 1.10-2;
- c. percent of the watershed that is affected by Southgate Project; and
- d. percent of the watershed that is affected by the other projects identified in the shared HUC-12 watershed.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

Cumulative Impacts

14. Provide a table that lists each HUC-10 watershed affected by the Southgate Project, and include the information below for each watershed:

- a. number and type of waterbodies crossed by the Southgate Project;
- b. the total number and type of waterbodies crossed by the projects combined in each HUC-10 watershed for all relevant projects identified in table 1.10-2;
- c. percentage of the watershed that is affected by the Southgate Project; and
- d. percentage of the watershed that is affected by other projects identified in the shared HUC-10 watershed.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

Cumulative Impacts

15. For the resource-specific cumulative impacts analyses discussed in RR1, include additional information listed below (if available).

- a. Aquatic Resources: Identify if a perennial stream crossed by the Southgate Project has the potential to be crossed by another project within the same HUC-10 watershed. If so, give the distance between the crossings.
- b. Noise:
 - i. identify any potential sound-emitting projects within 0.5-mile of proposed drill or direct pipe sites and if cumulative noise levels could affect noise sensitive areas (NSA) identified within the construction noise geographic scope;
 - ii. identify all projects that could affect any NSAs within 1 mile of a noise emitting permanent aboveground facility; and
 - iii. calculate cumulative noise levels affecting NSAs for projects that meet the above criteria.
- c. Air:
 - i. identify all projects within 50 kilometers (km) of the Southgate Project operational facilities; and
 - ii. report emissions for each project within 50 km of a Southgate Project compressor station.

Response:

- 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.
- b. The list of possible future actions is summarized in Resource Report 1.
 - i. There are no projects included in the list of reasonably foreseeable actions that are within 0.5 miles of a proposed drill or direct pipe site. Due to the relatively short duration of the planned construction activities at the proposed drill and direct pipe sites, and the remote nature of the crossing locations, it is unlikely that there will be any construction projects occurring during nighttime hours in close enough proximity to cause cumulative impacts.
 - ii. The only project included in the list of reasonably foreseeable actions that is within

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

**Responses to Environmental Information Request
Dated February 13, 2019**

one mile of the Project permanent noise emitting facilities is the Mountain Valley Pipeline project. However, the Mountain Valley Pipeline project does not include any noise emitting facilities that are within one-mile of any of the Project facilities.

iii. There are no known projects that meet the cumulative impact assessment criteria for noise.

c. The projects within 50 kilometers of the Project operations are provided in Table 15-1 below. The air emissions for major sources located within 50 kilometers of the Lambert Compressor Station are provided in Table 15-2 below.

Table 15-1 Facilities with Air Quality Impacts within 50-km of MVP Southgate Operations		
County / State	Facility	Approximate Distance to the MVP Southgate Project (kilometers)
Pittsylvania, VA	Transcontinental Gas Pipe Line Company, LLC - Station 165	1
Rockingham, NC	Duke Energy Carolinas, LLC - Dan River Combined Cycle Facility	2
Alamance, NC	APAC-Atlantic, Inc. - Plant #8	13
Pittsylvania, VA	Owens-Brockway Glass Container Inc - Ringgold	16
Rockingham, NC	Transcontinental Gas Pipe Line Company, LLC - Station 160	17
Rockingham, NC	Rockingham County Landfill	18
Alamance, NC	Alamance Aggregates, LLC	20
Guilford, NC	City of Greensboro - T.Z. Osborne Water Reclamation Facility	20
Randolph, NC	Norcraft Companies, LP, - UltraCraft Cabinetry	26
Orange, NC	The University of North Carolina at Chapel Hill	31
Guilford, NC	N. S. Flexibles, LLC	36
Stokes, NC	Duke Energy Carolinas, LLC - Belews Creek Steam Station	41
Guilford, NC	Plantation Pipe Line Company	41
Guilford, NC	City of High Point - Eastside Wastewater Treatment Plant	45
Durham, NC	NIEHS	47

Table 15-2 Project Emissions for Major Air Quality Projects within 50-km of Lambert Compressor Station					
County / State	Facility	Annual Project Emission Potential (tons per year)			
		NO_x	VOC	SO₂	Particulates
Pittsylvania, VA	Transcontinental Gas Pipe Line Company, LLC - Station 165	182.3	35.4	12	23.3

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

Cumulative Impacts

16. There are at least nine solar generation facilities in various stages of planning or operation located near the Southgate Project in Rockingham and Alamance Counties, North Carolina. Include these facilities in table 1.10-2 if they fall within the geographic scopes for the corresponding resource. Describe potential resource-specific cumulative impacts resulting from these projects. In particular, describe the potential impacts from the 80-megawatt (MW) solar generation facility proposed in Gibsonville, North Carolina that may be sited directly adjacent to the existing Transco right-of-way at mileposts (MP) 49 to 50.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

Cumulative Impacts

17. Describe resource-specific cumulative impacts resulting from ongoing or potential resource extraction operations in the geographic scopes of the Southgate Project, or confirm none exist.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

Cumulative Impacts

18. RR1 does not currently include a resource-specific discussion regarding cumulative impacts on recreation, special interest areas, or visual resources. Describe potential cumulative impacts on these resources as a result of the Southgate Project using the geographic scope identified in table 1.10-1. Additionally, discuss potential cumulative impacts on ecotourism that could result from the Project when assessed with other projects in the area.

Response:

As discussed in Resource Report 8, Section 8.4, several public and private recreational or special interest areas will be crossed or adjacent to the Southgate Project. Some of these areas may be utilized for ecotourism (e.g., the Banister River, Sandy River, Dan River, Haw River, and the Mountains-To-Sea Trail). Cumulative impacts on these resources could result if the Southgate Project and other projects listed in Resource Report 1, Table 1.10-2, are constructed in the same area during the same timeframe. Recreational or special interest areas impacts associated with construction and operation of the Southgate Project and other projects may result from the removal of vegetation, particularly in forested areas. To the extent practicable, the Project has attempted to avoid large tracts of forest land to reduce potential visual impacts on the landscape. A significant portion of the pipeline will be located adjacent to and collocated with existing utility rights-of-way. The site for the Lambert Compressor Station is off-set from the nearest public roadway, consists of forested land and agricultural field, and is located adjacent to existing industrial development and will be set back from the road far enough so that the grade of the terrain and existing wooded vegetation provides adequate visual screening for the facility from the road. The cumulative effect on visual resources from the Southgate Project, when considered with the other projects, is minimal as the Project has been designed to reduce impacts on visual resources.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 1 – General Project Description

Cumulative Impacts

19. RRI does not currently include a resource-specific discussion regarding cumulative impacts on environmental justice communities. Identify all projects within shared or adjacent census tracts to Southgate Project facilities and discuss potential cumulative impacts on environmental justice communities as a result of the Southgate Project when considered with other projects in the area.

Response:

The Project evaluated other projects within potential environmental justice communities shared by the Southgate Project and other projects that occur in potential environmental justice communities not shared by the Project (see Attachment 19-1). Other projects that are within potential environmental justice communities shared by the Southgate Project are in North Carolina and include the existing Transco Pipeline in Rockingham County and LGI Homes Bedford Hills and Clayton Homes in Alamance County.

The Southgate Project and the other shared projects are not expected to result in disproportionate impacts on the health, social conditions, or economic conditions of minority or low-income communities. The primary adverse impacts associated with the construction of these projects include temporary noise, dust, and traffic impacts. None of these impacts are considered significant given the temporary nature of the impacts and measures that each project would implement to minimize such impacts. In addition, construction of the Southgate Project would begin after construction of the other shared projects is complete. Construction related impacts associated with the Southgate Project will occur in areas with a variety of socioeconomic backgrounds.

Positive cumulative economic benefits will be generated from the Southgate Project and other shared projects, including an increase in annual tax revenue from project operations and an increase in permanent employment with the cumulative benefit of potentially lowering local unemployment rates. The construction and operation of the Southgate Project and the other shared projects would not cause a disproportionate share of adverse environmental or socioeconomic impacts on any racial, ethnic, or socioeconomic groups that meet the environmental justice criteria; therefore, it is not anticipated cumulative impacts on environmental justice communities will result from the construction of the Southgate Project when considered with the other shared projects in the area.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Water Resources

20. In response to the Virginia Department of Environmental Quality's (VADEQ) comments filed on January 10, 2019, address the items from their comments listed below and confirm that all laws, regulations, and permits required by the VADEQ would be followed.

- a. Wetlands and Water Quality: All comments, recommendations, and requirements in items 1(a) through 1(e).
- b. Erosion and Sediment Control and Stormwater Management: All comments, recommendations, and requirements in items 2(a) and 2(b).
- c. Water Supply: All comments, recommendations, and requirements in 3(a) and 3(b).
- d. Solid and Hazardous Wastes: All comments, recommendations, and requirements in 4(a) through 4(c).
- e. Water Planning and Monitoring: All comments, recommendations, and requirements in 5(a) through 5(c).

Response:

The Project will continue to work with the VADEQ to ensure that all necessary permits under their jurisdiction are acquired and in compliance based on current regulations. VADEQ comments on the Project's November 2018 Resource Reports are provided in Attachment 20-1.

a. Wetlands and Water Quality

VADEQ Comment: Wetlands and Water Quality. Resource Report 2 (page 2-36) states that wetland field delineations have been conducted where survey access has been granted and detailed desktop analysis has been completed where survey access has not been granted. According to the resource report, the project would attempt to minimize the number and extent of wetland crossings to the extent practicable. Where wetlands cannot be avoided, the project would minimize impacts through the use of specialized wetland construction procedures (page 2-39).

Resource Report 2 (page 2-26) states that hydrostatic test water may be discharged. To the extent practicable, MVP would discharge the water to an upland well-vegetated area within the same watershed from which it was withdrawn.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Response:

The Project confirms the above statements are still accurate.

VADEQ Comment: 1(a) Agency Jurisdiction.

The State Water Control Board promulgates Virginia's water regulations covering a variety of permits to include the Virginia Pollutant Discharge Elimination System (VPDES) Permit regulating point source discharges to surface waters, Virginia Pollution Abatement (VPA) Permit regulating sewage sludge, storage and land application of biosolids, industrial wastes (sludge and wastewater), municipal wastewater, and animal wastes, the Surface and Groundwater Withdrawal Permit, and the Virginia Water Protection (VWP) Permit regulating impacts to streams, wetlands, and other surface waters. The VWP Permit is a state permit which governs wetlands, surface water, and surface water withdrawals and impoundments. It also serves as §401 certification of the federal Clean Water Act §404 permits for dredge and fill activities in waters of the U.S. The VWP Permit Program is under the Office of Wetlands and Stream Protection within the DEQ Division of Water Permitting. In addition to central office staff that review and issue VWP permits for transportation and water withdrawal projects, the six DEQ regional offices perform permit application reviews and issue permits for the covered activities:

- *Clean Water Act, §401;*
- *Section 404(b)(i) Guidelines Mitigation Memorandum of Agreement (2/90);*
- *State Water Control Law, Virginia Code section 62.1-44.15:20 et seq.; and*
- *State Water Control Regulations, 9VAC25-210-10.*

Response:

The Project is aware of the cited regulations and agrees to comply with the relevant requirements. The Project submitted a Standard Joint Permit Application to the U.S. Army Corps of Engineers (“USACE”), VDEQ, and the Virginia Marine Resources Commission (“VMRC”) on November 30, 2018. The application requested verification under a Nationwide Permit (“NWP”) 12 for utility line activities consistent with the Virginia general 401 Water Quality Certification (“WQC”) for NWP 12. In Virginia, the Project will not result in a permanent loss of wetlands or waters of the United States (“US”) or Virginia. It is designed and will be constructed in accordance with the NWP 12 general terms and conditions, the USACE Norfolk District regional general NWP and specific NWP 12 conditions, and the Virginia conditional WQC of NWP 12.

VADEQ Comment: 1(b) Agency VWP Permit Comments.

Information presented in these resource reports is preliminary, and, therefore, the findings and recommendations listed below are preliminary. As the project evolves, more data and information may be submitted that address the findings and recommendations listed below.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Response:

The Project understands comments submitted to date are based on the information that has been provided by the Project thus far, and that additional findings or recommendations could result from newly submitted Project information.

VADEQ Comment: Information presented in these resource reports is based on 77% completed wetland delineation as of September 2018.

Response:

The Project will provide updated delineation maps and acreages based on survey work completed through the end of January 2019 within the Supplemental Information Package to be submitted in March 2019.

VADEQ Comment: 1(c) Agency Findings.

1(c)(i) Resource Report 2.

- *Time-of-year restrictions may also apply in specific water bodies and/or crossing locations, as determined by the Virginia Department of Game and Inland Fisheries (DGIF) and/or Virginia Department of Conservation and Recreation (DCR).*

Response:

The Project is aware that DGIF or DCR may apply time of year restrictions to specific water bodies and/or crossing locations. The Project will comply with applicable time of year restrictions as applicable based on agency consultations.

VADEQ Comment: Potentially contaminated groundwater is addressed in Section 2.2.3.5.

- *It is not clear if petroleum contaminated sites near the project have been assessed.*

Response:

Petroleum contaminated sites near the Project were assessed and results are provided in Resource Report 2, Table 2.2-3.

VADEQ Comment: It is also not clear how contaminated groundwater will be identified prior to trench dewatering. Contaminated groundwater may either require a discharge permit or transport to a treatment facility.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Response:

The Project developed an Unanticipated Discovery of Contamination Plan (“Plan”), which is included as Appendix A of the Spill Prevention, Control and Countermeasure (“SPCC”) Plan for Virginia and North Carolina (Appendix 1-G in Resource Report 1). The Plan includes a description of the procedures, notifications, and reporting requirements should groundwater contamination be observed during construction.

VADEQ Comment: It doesn't appear that dewatering proximate to wells and springs is addressed.

Response:

Section 2.2.4.1 of Resource Report 2 addresses potential impacts to wells from dewatering activities. It also includes measures that will be implemented to minimize or mitigate for impacts. The Project will provide an updated information on springs within the Supplemental Information Package to be submitted in March 2019.

VADEQ Comment: 1(c)(ii) Resource Report 3. There does not appear to be a survey plan for freshwater mussels in Virginia. This resource report only appears to address mussels in the North Carolina portion of the project.

Response:

Based on verbal comments provided by VDGIF, a freshwater mussel study plan was prepared for the crossings of Banister and Sandy rivers. This plan was submitted to USFWS and VDGIF for review and comment on February 22, 2019. VDGIF provided concurrence with the plan on February 27, 2018.

VADEQ Comment: 1(d) Agency Recommendations.

1(d)(i) Resource Report 1.

Confirm that surface waters were/will be delineated for all access roads, stockpile and materials storage areas, or other construction-related areas. This includes delineation of any isolated and spring-fed surface waters.

Response:

The Project will delineate all surface waters (including isolated or spring-fed surface waters) in areas that will be disturbed during construction, including access roads and stockpile and material storage areas. An updated delineation map and impact calculations for surface water features will be provided within the Supplemental Information Package to be submitted in March 2019.

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

Responses to Environmental Information Request
Dated February 13, 2019

***VADEQ Comment:** Fully document all avoidance and minimization efforts for proposed surface water impacts.*

Response:

The Project submitted a description of surface water and wetland impact avoidance and minimization measures as part of its Standard Joint Permit Application to the USACE-Norfolk District, VADEQ, and the VMRC on November 30, 2018. Section 5.3 of the report that accompanied the application submittal contains the avoidance and minimization measures.

***VADEQ Comment:** Identify existing easements for compensatory mitigation projects, if any, within the route.*

Response:

There are no existing easements for compensatory mitigation projects within the Project limits.

***VADEQ Comment:** Fully consider all recommended time-of-year restrictions from DGIF and DCR.*

Response:

VA Time of Year Restrictions (available at <https://www.dgif.virginia.gov/wp-content/uploads/VDGIF-Time-of-Year-Restrictions-Table.pdf>) with potential applicability to the Project include:

- Natural Trout Streams October 1 - March 31 for Brown Trout (*Salmo trutta*) and Brook Trout (*Salvelinus fontinalis*) waters, and March 15 - May 15 for Rainbow Trout (*Oncorhynchus mykiss*) waters;
- Stockable Trout Streams - there are no time of year restrictions for stockable trout; however, as recommended by the VDGIF, the Project will consult with the VDGIF regional offices before constructing in stockable trout streams (if applicable).
- Roanoke Logperch (*Percina rex*) waters - March 15 - June 30
- Short-term brooders - Atlantic pigtoe (*Fusconaia masoni*) and James spinymussel (*Parvaspina collina*) – May 15 – July 31
- Long-term brooders - Green floater (*Lasmigona subviridis*) and Yellow lampmussel (*Lampsilis cariosa*)– April 15 – June 15 and August 15 - September 30
- Bald eagle nest sites - December 15 through July 15
- Colonial bird rookeries –
 - great egret, green heron (Tier IVb), yellow-crowned night heron, etc – April 1 – August 15
 - great blue heron – February 15 through July 31

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Trout Streams

The Project does not cross native trout streams or stockable trout waters. Therefore, time of year restrictions associated with these types of waters are not applicable to the Project.

Fishes

A search of the WERMs database did not identify any streams potentially supporting populations of Roanoke logperch. During a July 6, 2018 teleconference, VDGIF and USFWS indicated that federal and state listed fishes were not likely to occur in waters crossed by the Project and that surveys for fishes would not be requested. Therefore, time of year restrictions for fishes are not proposed for waters crossed by the Project. The Project will minimize instream effects to aquatic life by removing fish, crayfish, mussels, reptiles, and amphibians in perennial streams where instream substrates will be exposed (e.g., dewatered).

Mussels

A search of the WERMs database did not identify any streams potentially supporting populations of the Atlantic pigtoe (*Fusconaia masoni*), James spinymussel (*Parvaspina collina*), Green floater (*Lasmigona subviridis*), and Yellow lampmussel (*Lampsilis cariosa*). VDGIF and VDCR indicated that rare mussels are thought to occur in the Banister and Sandy rivers. The Project will conduct mussel surveys in these two waterbodies in spring 2019; if live Atlantic pigtoe, James spinymussel, green floater or yellow lampmussel are found, then the Project will implement the applicable time of year restrictions listed above for those affected waters. A mussel survey study plan was submitted to VDGIF and USFWS on February 22, 2019 for review and approval prior to 2019 survey activities.

Birds

The Project will conduct an aerial survey for nesting bald eagles and colonial waterbirds prior to construction. If bald eagle nests or rookeries are identified, the Project will consult with USFWS and VDGIF to identify appropriate conservation measures.

VADEQ Comment: *While the report concludes that there are no anticipated karst hazards, based on a desktop review of peer-reviewed, publicly available geologic mapping, if karst features are observed during construction, then the project proponent should employ a karst specialist to conduct appropriate field investigations.*

Response:

As discussed in Resource Report 6, Section 6.5.1, while karst hazards are not anticipated, if karst features are observed during construction, the Project will employ a karst specialist to conduct a field investigation to inspect and characterize the karst features and potential for subsurface connectivity. The karst specialist will coordinate with the Project's qualified geologist to conduct the field inspection and will notify the applicable agencies regarding the karst feature. If the karst feature is determined to have subsurface connectivity and present a potential hazard to pipeline construction and operation, or be a potential conduit to local

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

**Responses to Environmental Information Request
Dated February 13, 2019**

groundwater resources, appropriate mitigation measures will be identified by the karst specialist and will be discussed with the applicable agencies prior to implementation.

***VADEQ Comment:** Fully document any frac-out containment plans for conventional bore drilled crossings of any surface water.*

Response:

The Project's HDD Contingency Plan has been updated to include measures for inadvertent releases associated with conventional bore drilled crossings (see Attachment 36-1 of Question#36 within this response package). The containment measures will be the same as that described for HDD crossings.

***VADEQ Comment:** 1(d)(ii) Resource Report 2.*

Confirm that VPDES permits cover hydrostatic test water discharges, if any.

Response:

The Project will comply with the General Permit No. VAG83: VPDES General Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests (9VAC25-120-80) prior to discharging hydrostatic test water discharges.

***VADEQ Comment:** Compensation may be required for permanent conversion of forested wetland to emergent (herbaceous) wetland, except for a 20-foot wide maintenance corridor.*

Response:

The Project will provide compensatory mitigation for the permanent conversion of forested wetland to emergent wetland by purchasing credits from an approved mitigation bank. The Project is working with the Banister Bend Mitigation Bank to reserve forested wetland mitigation credits for the Project. Letters from the bank indicating available credits in Virginia are included as Attachment 1b-1 of Question#1 within this response package.

***VADEQ Comment:** Clarify Delineation Table A-1-1 to state whether identified wetlands are within a construction footprint, or within a larger study area corridor.*

Response:

The wetlands in Delineation Table A-1-1 (*Field Delineated Wetlands in the Virginia Southgate Project Survey Area*) are those delineated in a larger survey corridor area. The survey area is defined in Section 1.2 of the Wetland Delineation Report (Appendix 2-I in Resource Report 2).

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

**Responses to Environmental Information Request
Dated February 13, 2019**

***VADEQ Comment:** Use the WetCAT mapping product to assess any permanently impacted wetland systems over 1 acre in size.*

Response:

The Project is not proposing impacts of one acre or more in size to any wetland system. The largest impact to a wetland system within the Project limits is approximately 0.66 acre of permanent conversion of forested wetland to herbaceous wetland between milepost 4.9 and 5.2. The wetland system consists of five delineated polygons, which are identified in Table 20-1 below.

Table 20-1 -							
Feature ID /Wetland Type	Milepost	Latitude	Longitude	Watershed (HUC 10)	Pipeline Crossing Length (ft)	Temporary Construction Impacts (acres)	Permanent Conversion PFO to PSS/PEM (acres)
W-D18-7 / PFO	4.9	36.77481	-79.3989	301010501	373	0.46	0.25
W-D18-1 / PFO	5	36.77318	-79.3997	301010501	14	0.02	< 0.01
W-D18-1-2 / PFO	5	36.77292	-79.3997	301010501	123	0.18	0.07
W-D18-1-3 / PFO	5.1	36.77185	-79.4003	301010501	86	0.15	0.05
W-D18-1-4: PFO	5.2	36.77164	-79.4012	301010501	309	0.51	0.21
W-D18-1-6 / PFO	5.2	36.77137	-79.4021	301010501	113	0.31	0.08
						Total	0.66

***VADEQ Comment:** Private water resources within 150 feet of the alignment work area should be identified. Table 2.2.2 lists the private wells identified by civil surveys where access currently has been granted. Update the information in Table 2.2.2 as it becomes available, and make it easily accessible on a web page, showing specifically which property owners have granted access and which have not.*

Response:

The Project will provide an updated Table 2.2.2 (FERC Resource Report 2) within the Supplemental Information Package to be submitted in March 2019 and will add the updated information to its web page. The Supplemental Information Package will include information about which property owners have granted site access and which have not.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

VADEQ Comment: DEQ is creating a database of springs throughout Virginia; however, that information is not available at this time. The database may not include all springs along the project corridor. Any springs and spring-fed isolated surface waters located near or within the project limits should be identified and delineated.

Response:

The Project will continue to delineate any spring or spring-fed isolated surface waters as part of its field surveys. The Project will provide an updated information on springs within the Supplemental Information Package to be submitted in March 2019.

VADEQ Comment: All appendices, tables, and maps/drawings containing crossing information for wetlands and streams should be kept up-to-date by the project proponents and made easily accessible on the project's web site so that DEQ can provide hyperlinks to the information. DEQ should not be generating these sources of information for public distribution.

Response:

The Project will upload updated information to the public on its website at: <http://www.mvpsouthgate.com/>. This website is updated as filings are made with the FERC and other agencies.

VADEQ Comment: Ensure that all water withdrawals comply with appropriate DEQ programs.

Response:

Water withdrawals will comply with appropriate DEQ programs. Trench dewatering during construction will be conducted in accordance with the current General VPDES Permit for Discharges of Stormwater from Construction Activities, as authorized the Virginia Stormwater Management Program and the Virginia Stormwater Management Act. The Project is aware the current GP No. VAR10 expires June 30, 2019, and that the Project's VPDES registration will be contingent on requirements/standards of the new/re-issued general permit.

VADEQ Comment: All proposed surface water impacts should be categorized as either permanent or temporary impacts.

Response:

The Project will provide an updated impact table with delineation maps and impact tables for all surveyed resources within the Project limits through January 2019 within the Supplemental Information Package to be submitted in March 2019. This table will specify whether impacts are permanent or temporary. Appendix L-1 in the Standard Joint Permit Application filed with

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

**Responses to Environmental Information Request
Dated February 13, 2019**

the USACE Norfolk District, VADEQ, and VMRC on November 30, 2018 identifies the Project’s proposed impacts by type (temporary vs. permanent) for field-delineated and desktop-estimated resources within the Project limits as of September 2018.

VADEQ Comment: 1(d)(iii) Resource Report 10. *The project proponent should provide a table containing the surface water feature list for the preferred route and route alternatives 1, 2, and 3 for ease of comparison.*

Response:

A table containing a surface water feature list for the preferred route and route alternatives 1, 2, and 3 is provided in Table 20-2 below.

Table 20-2				
Feature	Preferred Route	Route Alternative 1	Route Alternative 2	Route Alternative 3
Total Wetlands (NWI) crossed (feet)	1240	726	3,047	3,159
PEM NWI wetlands affected by construction (acres) <u>a/</u>	0.2	0	0	0.6
PEM NWI wetlands affected by operation (acres) <u>b/</u>	0.1	0	0	0.4
PSS NWI wetlands affected by construction (acres) <u>a/</u>	0.7	0.6	0.5	2.1
PSS NWI wetlands affected by operation (acres) <u>b/</u>	0.5	0.4	0.4	1.2
PFO NWI wetlands crossed (feet)	755	391	2,763	1,614
PFO NWI wetlands affected by construction (acres) <u>a/</u>	1.3	0.8	4.9	2.8
PFO NWI wetlands affected by operation (acres) <u>b/</u>	0.9	0.5	3.3	1.9
Perennial waterbody crossings (number)	16	14	19	31
Crossings of major waterbodies (>100 feet) (number)	0	0	0	0
<u>a/</u> Assuming 75-foot-wide construction ROW.				
<u>b/</u> Assuming a 50-foot-wide permanent ROW.				

VADEQ Comment: 1(e) Requirements.

1(e)(i) Wetlands.

Complete delineations of all surface waters, including isolated surface waters regulated by DEQ, are necessary to determine the proposed amount of impacts, both permanent and temporary, before any impact/compensation analysis can be performed.

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

Responses to Environmental Information Request
Dated February 13, 2019

Response:

The Project understands that complete delineations of all regulated surface waters within the Project limits is needed to determine final impacts and compensation. The Project will provide an update on surface water delineations, proposed impacts and compensation for all surveys completed through the end of January 2019 within the Supplemental Information Package to be submitted in March 2019.

VADEQ Comment: Permanently impacted wetlands or streams, located in Virginia, must be compensated for in Virginia.

Response:

The Project understands that all project-related impacts to wetlands or streams located in Virginia must be compensated for in Virginia. The Project intends to provide compensatory mitigation for the conversion of forested wetland to non-forested wetland through purchase of wetland mitigation credits at a 1:1 ratio from the Banister Bend Mitigation Bank located in Pittsylvania County, Virginia. This bank's service area covers the watersheds where the proposed impacts occur. The Project has attached a letter of credit availability from the bank as part of Attachment 1b-1 of Question#1 within this response package.

VADEQ Comment: 1(e)(ii) VPDES.

- *Section 2.3.3, Hydrostatic Test Discharges: 9VAC25-120 (VAG83) - Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests is a general permit that applies to hydrostatic testing discharges. Effluent limitations apply, and there are narrative requirements that (1) the equipment being tested be substantially free of debris, raw material, product, or other residual materials; and (2) the discharge flow be managed to control the volume and velocity of the discharge, including peak flow rates and total volume, to minimize erosion at outlets, and to minimize downstream channel and stream bank erosion. While registration under the permit is not required for hydrostatic test discharges, the conditions and requirements of the permit including sampling, analysis and notification do apply.*
- *9VAC25-120-60 addresses authorization to discharge under the Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests General Permit. This section specifically states that an applicant is ineligible for coverage under the general permit if the owner is proposing to discharge to surface waters where there are permitted central wastewater treatment facilities reasonably available, as determined by the board.*

Response:

The Project is aware of the cited regulations and will abide by all applicable requirements. If hydrostatic test water must be discharged to a waterbody, the Project will comply with the General Permit No. VAG83: VPDES General Permit for Discharges from Petroleum

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

Responses to Environmental Information Request
Dated February 13, 2019

Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests (9VAC25-120-80).

VADEQ Comment: *HDD Contingency Plan (Appendix 2-H):*

– *Inadvertent Return*

- *Section 3.4 of the Contingency Plan indicates that the North Carolina Department of Environmental Quality will be notified. Notifying Virginia DEQ is essential for incidents that occur within the Commonwealth of Virginia.*
- *In Section 3.4 the Contingency Plan indicates that the Project’s Environmental Department will contact state and/or federal environmental agencies (if applicable) for notification requirements in the event of an inadvertent return.*
- *9VAC25-31-50 addresses prohibitions under the VPDES regulation. Subpart B of that section states:*

Any person in violation of 9VAC25-31-50 A, who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters; or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of subsection A of this section shall notify the department of the discharge, immediately upon discovery of the discharge but in no case later than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted by the owner, to the department, within five days of discovery of the discharge. The written report shall contain:

- 1. A description of the nature and location of the discharge;*
- 2. The cause of the discharge;*
- 3. The date on which the discharge occurred;*
- 4. The length of time that the discharge continued;*
- 5. The volume of the discharge;*
- 6. If the discharge is continuing, how long it is expected to continue;*
- 7. If the discharge is continuing, what the expected total volume of the discharge will be; and*
- 8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by the permit.*

Response:

The Project’s HDD Contingency Plan has been updated to include contact information and notification and reporting requirements for inadvertent releases in Virginia (see Attachment 36-1 of Question#36 within this response package).

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

**Responses to Environmental Information Request
Dated February 13, 2019**

b. Erosion and Sediment Control and Stormwater Management.

VADEQ Comment: 2(a) Agency Jurisdiction.

The DEQ Office of Stormwater Management (OSM) administers the following laws and regulations governing construction activities:

- Virginia Erosion and Sediment Control Law (VESCL) (§ 62.1-44.15:51 et seq.) and Regulations (VESCL&R) (9VAC25-840);*
- Virginia Stormwater Management Act (VSMA) (§ 62.1-44.15:24 et seq.);*
- Virginia Stormwater Management Program (VSMP) regulation (9VAC25-870); and*
- 2014 General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Construction Activities (9VAC25-880).*

In addition, DEQ is responsible for the VSMP General Permit for Stormwater Discharges from Construction Activities related to Municipal Separate Storm Sewer Systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program (9VAC25-890-40).

Response:

The Project acknowledges the jurisdiction and responsibilities of the VADEQ Office of Stormwater Management.

VADEQ Comment: 2(b) Requirements.

Natural gas transmission projects that result in regulated land disturbing activities equal to or greater than 1 acre must obtain and comply with DEQ approved Annual Standards and Specifications for Stormwater Management (SWM) and Erosion and Sediment Control (ESC). Annual Standards and Specifications must be prepared in accordance and consistent with the Virginia Stormwater Management Act (VSMA), the Virginia Stormwater Management Program (VSMP) regulation, the Virginia Erosion and Sediment Control Law, and the Virginia Erosion and Sediment Control regulations. Plans for erosion and sediment control and post-construction stormwater management must be developed and implemented for all regulated land disturbing activities in accordance with the DEQ-approved Annual Standards and Specifications prior to initiating land disturbance. To minimize runoff following construction activities, the project must demonstrate compliance with the Virginia Stormwater Management Program post-construction requirements for water quality and quantity. The following measures and practices must be implemented to minimize potential impacts during construction activities:

Response:

The Project submitted an Annual Standards and Specifications document to the VADEQ for review on December 20, 2018. The Project received technical comments on the application on February 19, 2019. Once approved, the Project will submit erosion and sediment control

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

**Responses to Environmental Information Request
Dated February 13, 2019**

plans and post-construction stormwater management plans to Virginia DEQ for review and approval (anticipated in April 2019). Comments are also provided below for each of the measures and practices.

***VADEQ Comment:** Use the Virginia Erosion and Sediment Control Handbook (VESCH) diversion/breaker spacing specification.*

Response:

The Project will request a diversion/breaker spacing consistent with the spacing approved for other projects in Virginia. This deviation from Std & Spec 3.11 of the VESCH will be submitted as part of the Erosion and Sediment Control Plan submission.

***VADEQ Comment:** Conduct all land disturbance in accordance with Virginia Erosion and Sediment Control/Stormwater Management Law and Regulations.*

Response:

The Project will comply with Virginia's Erosion and Sediment Control/Stormwater Management Laws and Regulations.

***VADEQ Comment:** Restore and finish grading within 10 calendar days of backfill.*

Response:

Per Minimum Standard 1 (9 VAC 25-840-40.1), permanent or temporary vegetation will be applied within seven days of reaching final grade. If the backfill is not intended to reach final grade within 14 days, the Project will apply temporary stabilization measures within seven days of placing the backfill.

***VADEQ Comment:** Seed and straw mulch all disturbed areas on the same day the finished grade is achieved.*

Response:

Per Minimum Standard 1 (9 VAC 25-840-40.1) permanent or temporary vegetation will be applied within seven days of reaching final grade.

***VADEQ Comment:** Tack or crimp all straw mulch.*

Response:

The Project will comply with this request to tack or crimp all straw mulch.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

VADEQ Comment: Use a minimum of 2 tons per acre of straw mulch.

Response:

The Project will comply with this request to use minimum of 2 tons per acre of straw mulch.

VADEQ Comment: Use super silt fence in lieu of regular silt fence.

Response:

While super silt fence will be a sediment barrier device used as part of the Southgate Project, the Project will submit multiple sediment barrier devices for review and approval as part of the Annual Standards and Specifications and project-specific Stormwater Pollution Prevention Plan that will be submitted to the Virginia DEQ for review and approval.

VADEQ Comment: Identify all critical erosion areas on the Erosion and Sediment Control Plan.

Response:

The Project will comply with this request to identify all critical erosion areas on the Erosion and Sediment Control Plan.

VADEQ Comment: Use VESCH Spec. 3.36 Treatment 1 on all high erosion areas (>15% slope).

Response:

The Project will comply with this request to use VESCH Spec. 3.36 Treatment 1 on all high erosion areas (>15% slope).

VADEQ Comment: Use VESCH standards in lieu of FERC standards when the VESCH is the more stringent standard.

Response:

The Project will use VESCH standards where they are more stringent than the FERC standard.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

VADEQ Comment: Use VESCH turbidity curtain in all wetland and still water crossings.

Response:

The Project will comply where standing water is present and in accordance with VESCH standard & specification 3.27.

VADEQ Comment: Use permanent trench plugs at all wetlands.

Response:

The Project will comply with this request to use permanent trench plugs at all wetlands.

VADEQ Comment: Develop a frack-out monitoring and response plan for review and approval for all horizontal directional drilling (HDD).

Response:

No horizontal directional drills are proposed in the state of Virginia; however, the Project has developed an HDD Contingency Plan for the proposed drills on the Project.

VADEQ Comment: Use Virginia DEQ-approved native plants for permanent stabilization.

Response:

The Project will comply with this request to use approved native plants for permanent stabilization with landowner approval.

VADEQ Comment: No wet stream/river crossings.

Response:

The Project will comply with this request to only use dry crossing construction methods in Virginia.

VADEQ Comment: Bore all moderate and major stream/river crossings.

Response:

The Project has not identified any moderate or major stream/river crossings along the Southgate Project alignment in Virginia. Stream/river crossings will be accomplished utilizing dry crossing construction methods.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

VADEQ Comment: Develop a spill prevention plan for DEQ approval.

Response:

The Project will develop a spill prevention plan for DEQ approval.

VADEQ Comment: Use VESCH Vehicular Stream Crossings for any live watercourse that will be crossed more than two times in six months.

Response:

The Project will use the VESCH guidelines for vehicular stream crossings for any live watercourse that will be crossed in six months.

c. Water Supply.

VADEQ Comment:

Resource Report 2 (page 2-26) states that test water for hydrostatic testing is anticipated to be drawn from two municipal sources. The total volume of water used is anticipated to be approximately 8,500,000 gallons (page 2-27).

Response:

The total estimated volume of water used for hydrostatic testing in the Virginia portion of the Project is approximately 3,600,000 gallons. The Project currently plans to use municipal water sources for hydrostatic testing but continues to evaluate the use of groundwater wells or approved surface waters.

VADEQ Comment: 3(a) Agency Jurisdiction. *The DEQ Water Withdrawal Permitting Program administers the regulation for groundwater and surface water reporting and permitting, which requires monthly measure and annual reporting of surface and ground water withdrawals by applicable individuals or facilities that meet the threshold. The purpose of withdrawal reporting is to enable appropriate planning for the Commonwealth's future water needs through the collection of accurate information.*

Under the Ground Water Management Act of 1992, the DEQ Groundwater Withdrawal Permitting Program regulates ground water withdrawals in certain areas called Ground Water Management Areas. Groundwater is regulated under:

- The Ground Water Management Act of 1992 (Virginia Code, Title 62.1, Chapter 25)*
- Designated Groundwater Management Areas (9VAC25-600-10 et seq.)*
- The Groundwater Withdrawal Regulations (9VAC25-610-10 et seq.)*

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

**Responses to Environmental Information Request
Dated February 13, 2019**

The Virginia Water Protection Permit (VWP) Program regulates surface water withdrawals from state waters and related permanent structures, fill, excavation, or back-flooding. DEQ issues VWP permits for such impacts through use of the joint permit application process and collaboration between the Office of Water Supply and the Office of Wetlands and Stream Protection. Examples of projects include, but are not limited to, reservoirs, power plants, public water supply and industrial intakes, and irrigation withdrawals. Surface water is regulated under:

- *State Water Control Law, Virginia Code, §62.1-44.15:20 et seq.; and*
- *State Water Control Regulations, 9VAC25-210-10.*

Response:

The Project is not currently proposing to withdraw surface water or ground water for consumptive uses. Water needs will be supplied by municipal sources. The Project is evaluating using groundwater wells and will work with all applicable agencies if this changes.

VADEQ Comment: 3(b) Agency Recommendations. *MVP indicates that water for hydrostatic testing, HDD, and dust control will come from municipal sources. If necessary, additional potential sources for hydrostatic test water may include groundwater supply wells, and/or approved surface waters. In the event that withdrawals occur from surface water sources, then MVP should avoid an adverse effect or impairment to surface water by:*

- a. Withdrawing no more than 10% of the instantaneous flow rate from the channel.*
- b. Using the intake screens designed so that screen openings are not larger than 1 millimeter and;*
- c. Ensuring that screen face intake velocities are not greater than 0.25 feet per second.*

If surface water sources are used, then the EIS should include a discussion of what steps will be taken by MVP and its contractors to ensure that the requirements above are met. The EIS should provide the location of withdrawals and some assessment of river flows where withdrawals are proposed with a discussion of how the withdrawals will affect flows, particularly during low flow or drought conditions. The assessment should explain if any downstream water users may be affected by these water withdrawals, particularly during low flow periods. The DEQ Office of Water Supply can provide information of nearby intakes once the location of the withdrawals is known.

Response:

The Project currently plans to utilize municipal water sources for consumptive uses but continues to evaluate other available water sources. If surface waters are utilized, the Project will utilize temporary, floating, screened intake pumps with a screen size no larger than 4.7625 millimeters (0.1875 in) and preferably placed in water depths of 0.9 meter (3 ft) or greater. Intakes are designed to limit the through-screen approach velocity to 0.1524 meter per second (0.5 ft /sec) or less. This screen size is based on guidance from the West Virginia Department

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

Responses to Environmental Information Request
Dated February 13, 2019

of Environmental Protection (WVDEP 2017) and is also referenced in its Entrainment and Impingement Prevention BMP (WVDEP 2015), and was chosen because the Project is not located in areas with anadromous fishes where specific guidance for Virginia exists.

d. Solid and Hazardous Wastes.

Resource Report 7 (page 7-15) states that although the probability of encountering contaminated soil during construction is expected to be low, should existing contaminated soil be encountered, it could pose health and safety concerns to construction workers and potentially elevate overall environmental risk through increased exposure. If contaminated soil is encountered during construction, MVP would implement its Unanticipated Discovery of Contamination Plan.

VADEQ Comment: 4(a) Agency Jurisdiction. *On behalf of the Virginia Waste Management Board, the DEQ Division of Land Protection and Revitalization is responsible for carrying out the mandates of the Virginia Waste Management Act (Virginia Code §10.1-1400 et seq.), as well as meeting Virginia's federal obligations under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response Compensation Liability Act (CERCLA), commonly known as Superfund. The DEQ Division of Land Protection and Revitalization also administers those laws and regulations on behalf of the State Water Control Board governing Petroleum Storage Tanks (Virginia Code §62.1-44.34:8 et seq.), including Aboveground Storage Tanks (9VAC25-91 et seq.) and Underground Storage Tanks (9VAC25-580 et seq. and 9VAC25-580-370 et seq.), also known as Virginia Tank Regulations, and § 62.1-44.34: 14 et seq. which covers oil spills. Virginia:*

- *Virginia Waste Management Act, Virginia Code § 10.1-1400 et seq.*
- *Virginia Solid Waste Management Regulations, 9VAC20-81*
 - *(9VAC20-81-620 applies to asbestos-containing materials)*
- *Virginia Hazardous Waste Management Regulations, 9VAC20-60*
 - *(9VAC20-60-261 applies to lead-based paints)*
- *Virginia Regulations for the Transportation of Hazardous Materials, 9VAC20-110.*

Federal:

- *Resource Conservation and Recovery Act (RCRA), 42 U.S. Code sections 6901 et seq.*
- *U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 Code of Federal Regulations, Part 107*
- *Applicable rules contained in Title 40, Code of Federal Regulations.*

Response:

The Project acknowledges the laws and regulations cited above and confirms it will abide by applicable requirements.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

VADEQ Comment: 4(b) Agency Recommendations.

DEQ recommends that MVP and FERC review the project against U.S. Environmental Protection Agency (EPA) and DEQ databases to identify any parcels or areas where historical waste disposal or petroleum may be encountered to ensure appropriate measures are identified.

DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

Response:

The Project used Environmental Data Resources, Inc. (“EDR”) to conduct a search to identify potential and actual sources of contamination near the Project. Information from EDR is a compilation of a variety of available federal, state, and local government databases with information on known locations of current and historic contamination. Identified sites of potential contamination concern within 0.25 mile of the Project work space are reported in Resource Report 2, Appendix 2-D. In Virginia, 11 sites of interest were identified within 0.25 miles of the Project’s workspace. Eight of the sites are closed and there are no open violations at the three open sites.

VADEQ Comment: 4(c) Requirements.

4(c)(i) Soil, Sediment, Groundwater, and Waste Management. Any soil, sediment or groundwater that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 et seq.; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-81); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 et seq., and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Part 107.

Response:

The Project developed a Spill Prevention, Control, and Countermeasure Plan and an Unanticipated Discovery of Contamination Plan (see Resource Report 1, Appendix 1-G). These plans incorporate procedures for stopping work, notification, sampling, reporting, and disposal of potentially hazardous materials or wastes. All activities will be conducted in accordance with the above-referenced laws and regulations.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

VADEQ Comment: 4(c)(ii) Asbestos and/or Lead-based Paint. All structures being demolished/renovated/removed should be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-81-620 for ACM and 9VAC 20-60-261 for LBP must be followed.

Response:

The Project currently does not intend to demolish, renovate, or remove any buildings. Should structures need to be demolished, renovated, or removed, they will be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-81-620 for ACM and 9VAC 20-60-261 for LBP will be followed.

VADEQ Comment: 4(c)(iii) PCB Contaminated Waste. Any PCB contaminated waste should be managed in accordance with the VSWMR and in particular 9 VAC 20-81-630.

Response:

If the Project encounters PCB contaminated waste, it will be handled in accordance with 9 VAC 20-81-630 and USEPA regulations in 40 CFR Part 761.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Water Resources

21. Revise the *Water Resources Identification and Testing Plan* to include the information listed below.

- a. Testing of water supply wells and springs within 150 feet of the Project area should be offered regardless of whether the landowner has requested it. Therefore, confirm that Mountain Valley would offer both pre-and post-construction quality and yield testing to landowners for all water supply wells and springs within 150 feet of construction workspaces.
- b. Clarify the analytes Mountain Valley would test for in its second pre-construction sampling event (“reduced list”) and whether post-construction water quality testing would include analytes from the full expanded target analyte list or the reduced list.
- c. Clarify how Mountain Valley identified the analytes to include on its target analytes list.

Response:

- a. The Project confirms that pre- and post-construction quality and yield testing will be offered to landowners for all water supply wells and water supply springs within 150 feet of construction workspaces. The Water Resources Identification and Testing Plan has been updated accordingly and is included herein as Attachment 21a-1.
- b. In the second pre-construction sampling event, the Project will test for the full list of target analytes identified within Table 2 in the Water Resources Identification and Testing Plan with the exception of Volatile Organic Compounds, Semi-volatile Organic Compounds and Total Petroleum Hydrocarbons unless there is a concern noted by the property owner or the Project observes a verified detection of one of those analytes during the first sampling event.

Post-construction water quality testing conducted by the Project will include analytes from the full expanded target analyte list identified in Table 2 of the Water Resources Identification and Testing Plan.

- c. The Project identified analytes to include on its target analytes list through review of the U.S. Environmental Protection Agency guidance on Analytic Methods for Drinking Water (<https://www.epa.gov/dwanalyticalmethods>) as well as the following:

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Method 524.2 – Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography / Mass Spectrometry - <https://www.epa.gov/sites/production/files/2015-06/documents/epa-524.2.pdf>

Method 525.2 – Revision 2.0: Determination of Organic Compnds in Drinking Water by Liquid-Solid Extraction and Capillary Column Gas Chromatography / Mass Spectrometry - https://www.epa.gov/sites/production/files/2015-10/documents/method_525-2_rev-2_1995.pdf

Method 8015C – Nonhalogenated Organics by Gas Chromatography - <https://www.epa.gov/sites/production/files/2015-12/documents/8015c.pdf>

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Water Resources

22. Provide an updated table 2.2-2 to address “TBD” and include groundwater springs. Also file updates to this table as field surveys are completed.

Response:

The Project will provide an updated Table 2.2-2 within the Supplemental Information Package to be submitted in March 2019 that will address those cells previously identified as “To Be Determined” (TBD) and will include groundwater springs and resources identified during field surveys conducted subsequent to the November 2018 Project application.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Water Resources

23. Provide any additional septic systems identified during subsequent surveys and provide a plan to minimize impacts on septic systems that are within or near Project workspaces.

Response:

The Project will provide any additional septic systems identified during subsequent surveys, a table that identifies septic systems within the construction workspace, by milepost, and plans to minimize impacts on septic systems that are within or near Project workspaces within the Supplemental Information Package to be submitted in March 2019 and a final table will be submitted with the Implementation Plan.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Water Resources

24. Mountain Valley states that hydrostatic test water (at section 2.3.3), water for horizontal directional drills (HDD) (at section 2.3.4), and fugitive dust control water (at section 2.3.5) are anticipated to be obtained from municipal sources but that “if necessary, additional potential sources...may include groundwater supply wells, and/or approved surface waters.” As previously requested in our pre-filing comments on draft RR2, dated October 5, 2018, specify the groundwater supply wells and surface waters that may be used to source construction water needs, and confirm that sources used would not have contaminants. Additionally, discuss measures Mountain Valley would follow to minimize impacts potentially resulting from withdrawal from surface waterbodies.

Response:

At present, the Project intends to obtain water from municipal sources for hydrostatic test water, horizontal directional drills, and fugitive dust control. The Project continues to evaluate if groundwater supply wells, and/or approved surface waters are needed for construction water needs. Should these sources be needed, the Project will obtain all applicable permits and approvals. As discussed in Resource Report 3, Section 3.2.4, specific impact avoidance or minimization measures for water withdrawals include:

- Implement the FERC Plan and Procedures, the Project-specific E&SCP, and sustainable water-use practices to ensure water resources and environmentally responsible stream flows are maintained during water withdrawal activities.
- Conduct all water withdrawals in accordance with applicable local, state and/or federal regulations to prevent the localized and downstream dewatering of streams and minimize impacts to aquatic species.
- Utilize floating, appropriately sized screened intakes screen devices to prevent crushing, entrainment, or entrapment of mussels and fishes during water withdrawal.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Water Resources

25. Provide a copy of the Environmental Data Report (EDR) cited as follows: Environmental Data Resources, Inc. 2018. MVP Southgate Project EDR Area/ Corridor Report. August 2, 2018, Shelton CT. Cited in section 4.3.1.1.

Response:

The EDR Report cited as Environmental Data Resources, Inc. 2018. MVP Southgate Project EDR Area/ Corridor Report. August 2, 2018, Shelton CT is provided in Attachment 25-1.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Water Resources

26. As previously requested in our pre-filing comments on draft RR2, dated October 5, 2018, for the crossings of Cascade Creek, Wolf Island Creek, and Deep Creek, provide:

- a. for the use of the conventional bore crossing method, provide a site-specific plan for each proposed crossing indicating the location and size of each bore pit, and the location of dewatering structures;
- b. estimated time frame to complete the conventional bore at each crossing;
- c. an assessment of the probability of a successful conventional bore at each site, the potential for inadvertent returns (IR) during the bore, and include measures to be taken if an IR occurs.; and
- d. due to the sensitivity of these streams in regards to potential presence of sensitive species, describe the feasibility of using a HDD, including geotechnical study, to cross each of these streams.

Response:

- a. Site-specific plans for Cascade Creek and Wolf Island Creek are included in this request as Attachment 26a – 1, Site-Specific Conventional Bore Plans. A site-specific drawing for Deep Creek has not been prepared, as survey access has not been granted to allow for the Project to obtain detailed field information. The Project continues to work with the landowner to gain access for all surveys in this area. Once survey access has been acquired and field surveys completed, the Project will develop and submit a site-specific plan for this crossing.
- b. The duration of construction for conventional bore crossings of Cascade Creek, Wolf Island Creek and Deep Creek will likely range from 3 weeks to more than 6 weeks, depending on the crossing length, topography, soil conditions, and the need for blasting in areas of shallow bedrock.
- c. Based on the information obtained to date, the Project believes that there is a high probability of success for conventional bore crossings at each of the three waterbodies. As detailed within the site-specific plans in Attachment 26a-1, the length of each conventional bore is well within the standard industry limits for this construction technique. Additionally, the depth of bore pits do not appear to require an engineered solution to ensure completion of the pipeline installation while maintaining safe working conditions. The use of standard pit dewatering procedures would provide safe operation of the rig in the event that ground and/or surface water are present

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

**Responses to Environmental Information Request
Dated February 13, 2019**

within the bore pits. Unlike an HDD, the conventional bore technique does not require the use of bentonite or other drilling fluids and therefore, there is no potential for inadvertent returns into wetlands or waterbodies.

- d. The Project has evaluated, to the extent possible based on available information, the feasibility of using trenchless technologies to cross Cascade Creek, Wolf Island Creek and Deep Creek. Specifically, the Project evaluated the use of conventional bore and HDD. Table 26-1 below provides a general comparison between the two methods at Cascade Creek:

Table 26-1		
Attribute	Conventional Bore	HDD
Length of Crossings	Approximately 200 ft.	Approximately 1900 ft.
Time	Approximately 3-6 weeks	Approximately 8-12 weeks
Sediment Release	Minimal sediment release may occur with bore pit dewatering	N/A
Inadvertent Release of Drilling Fluid	N/A	Potential for IR of drilling fluids in unconsolidated soil, gravel, coarse sand, and fractured bedrock and clays
Contingency Method	Attempt bore at another location or use of dry-crossing technique	Use of dry-crossing technique or other trenchless methods
ATWS Requirements	Small workspace outside of stream buffer for soil storage	Large, 350 feet by 250 feet workspace on either side of the HDD, with the potential for ATWS used for pullback

Cascade Creek - The close proximity of the existing Williams Transco pipelines favors the use of the conventional bore method when compared to an HDD due to additional workspace constraints. The Project does not currently have access to the parcels where geotechnical investigations would be necessary to determine the suitability of subsurface material to finalize HDD feasibility; therefore, a geotechnical study has not been completed at this time.

Wolf Island Creek - The current alignment has insufficient area required for additional temporary workspace at the HDD entry point. Also, there is insufficient workspace available for at the exit point to fabricate the pullback string due to the proximity to existing development. A conventional bore appears to be feasible based on workspace requirements and subsurface geology and would be the only feasible alternative to the dry-crossing method.

Deep Creek - The Project does not currently have access to the parcels where geotechnical investigations would be necessary to determine the suitability of subsurface material; therefore a geotechnical study has not been completed for a potential HDD crossing of Deep Creek. A conventional bore crossing of this waterbody appears to be feasible from a

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

**Responses to Environmental Information Request
Dated February 13, 2019**

workspace perspective, however a bathymetry surveys has not been completed to determine the depth of the waterbody. Therefore, final feasibility cannot be determined as the depth of the waterbody defines the required depth of the bore pits to ensure sufficient depth of cover for the pipeline under the bed of the waterbody.

Due to the overall shorter impact to the waterbody and sensitive species, no potential for inadvertent returns, and the smaller impact for additional workspace, the Project has determined that the conventional bore crossing technique would be preferable to HDD for Wolf Island and Cascade Creek.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Water Resources

27. Provide any updated correspondence between Mountain Valley and the Virginia Department of Conservation and Recreation (VDCR) in regards to the crossing of the Sandy River. Identify and discuss any mitigation or minimization measures recommended by VDCR that Mountain Valley would implement to protect the Sandy River.

Response:

No further correspondence with the VDCR has occurred to date. At the open-cut crossing location of the Sandy River passage of recreational watercraft will be temporarily restricted. Restricted passage would be temporary, lasting a maximum of three construction work days. The Project will consult with the Virginia Department of Conservation and Recreation to identify the best locations to notify users (i.e., recreational websites and/or upstream access areas). Additionally, the Project will coordinate a portage path around the construction sites with the Virginia Department of Conservation and Recreation and will post signage to alert recreational users of the temporary detour. Additional correspondence will be filed with the Commission upon receipt.

While the Project will incorporate the above-described measures to alert recreational users, recreational watercraft use, if any, is anticipated to be minimal at the crossing locations. The Sandy River is not currently mapped as a Blueway, and there is no public boat access point mapped on the river (Virginia Outdoors Plan Mapper, accessed on February 19, 2019, <http://consapps.dcr.virginia.gov/dnh/vop/vopmapper.htm>).

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Water Resources

28. Provide any updated correspondence between Mountain Valley and the owners/managers of the Stony Creek Reservoir. Identify and discuss any mitigation or minimization measures recommended by the owner/managers that Mountain Valley would implement to protect the Stony Creek Reservoir.

Response:

The Project has been in contact with the City of Burlington's engineering department since April 18, 2018. The Project delivered an informational presentation and answered questions before the Burlington City Council during its August 20, 2018 work session. The Project exchanged additional correspondence with the City's engineering department on August 21 and September 6, 2018 regarding Stony Creek and Stony Creek Lake. The Project attempted follow-up contact via phone or email on September 28, October 11, October 26, November 6 and November 15, 2018 without success. No mitigation or minimization measures have been communicated to the Project. Correspondence with the City of Burlington is included as Attachment 28-1.

A phone message was also left at the engineering department on February 18, 2019. The Project will continue to attempt to correspond with the City of Burlington and will provide the results of future discussions to FERC in a separate filing.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Water Resources

29. Evaluate the feasibility of using a HDD to cross the Banister River and Sandy River. If the HDD method is not feasible, describe how Mountain Valley would ensure that impacts (including riparian impacts) from an open-cut crossing would not affect the current/future scenic designation (as described in section 8.4.1 of RR8) of these waterbody segments.

Response:

The Project evaluated the feasibility of a horizontal directional drill (HDD) to cross the Banister and Sandy River. A comparison of each crossing method and the overall impact for the Sandy and Banister Rivers are provided below in Table 29-1:

Table 29-1				
Attribute	Sandy River		Banister River	
	Open-Cut Dry-Ditch Crossing	HDD	Open-Cut Dry-Ditch Crossing	HDD
Length	Approximately 85 feet	Approximately 1,500 feet	Approximately 48 feet	Approximately 1700 feet
Time	5-10 days	Approximately 8-12 weeks	5-10 days	Approximately 8-12 weeks
Sediment Release	Limited sediment release due to the construction and removal of the dam	N/A	Limited sediment release due to the construction and removal of the dam	N/A
Inadvertent Release of Drilling Fluid	N/A	Potential for inadvertent return of drilling fluids in unconsolidated soil, gravel, coarse sand, and fractured bedrock and clays	N/A	Potential for IR of drilling fluids in unconsolidated soil, gravel, coarse sand, and fractured bedrock and clays
Contingency Method	N/A	Open-Cut or other trenchless methods	N/A	Open-Cut or other trenchless methods
ATWS Requirements	Small workspace outside of stream buffer for soil storage	Large, 350 feet by 250 feet workspace on either side of the HDD, with the potential for ATWS used for pullback	Small workspace outside of stream buffer for soil storage	Large, 350 feet by 250 feet workspace on either side of the HDD, with the potential for ATWS used for pullback

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Both methods of crossing appear to be feasible for the Sandy River and Banister River crossings, with varying risk associated with each. However, due to the co-location with the Williams-Transco pipelines, the current route favors the Open-Cut Dry-Ditch method of crossing. While an HDD may be technically feasible, alterations to the route would be necessary to accommodate the extra workspace required for an HDD.

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Water Resources

30. Provide any updated correspondence between Mountain Valley and the North Carolina Department of Environmental Quality (NCDEQ) in regards to the crossing of the Jordan Lake riparian zone. In addition, file Mountain Valley's response to NCDEQ's January 10, 2019 request for additional information concerning the 401 Individual Water Quality Certification and Buffer Authorization application.

Response:

Updated correspondence regarding the Major Variance application for riparian buffer crossings in the Jordan Lake Watershed between the Project and the NCDEQ can be found in Attachment 30-1. Additionally, please find the attached response to the NCDEQ's January 10, 2019 request for additional information concerning the 401 Individual Water Quality Certification and Buffer Authorization application as Attachment 30-2.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Water Resources

31. Revise appendix 2-A to include any timing windows for the waterbody crossings as required by the Virginia Department of Game and Inland Fisheries (VDGIF) and/or the VDCR per VADEQ comments.

Response:

The Project will provide an updated Appendix 2-A within the Supplemental Information Package to be submitted in March 2019 that will include any timing windows for the waterbody crossings as required by the Virginia Department of Game and Inland Fisheries (VDGIF) and/or the VDCR per VADEQ comments.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Water Resources

32. Address the comment from the City of Burlington which has requested avoidance of all city owned property which includes Stoney Creek Lake (accession number 20180911-5110).

Response:

The City's request has been taken into consideration and follow-up has been attempted by the Project. Please review the response to Question#28 within this response package for further details on this issue.

Name of Respondent: Mr. Travis Garrett
Title: Regional Land Supervisor
Phone Number: 304-627-9582

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Wetlands

33. Confirm that there are no wetland impacts (construction and operation) from contractor yards and cathodic protection. Table 3.4-1, notes 0.6 acre of wetland would be affected by contractor yards in North Carolina; however, no wetland impacts are accounted for in the wetland section and tables. Revise this section and update tables accordingly.

Response:

The Project is currently evaluating its proposed contractor yards and cathodic protection sites and will provide an updated Table 3.4-1 within the Supplemental Information Package to be submitted in March 2019. Should temporary wetland impacts be proposed within contractor yards and/or cathodic protection sites, the impacts will be accounted for within the applicable section of Resource Report 2 and associated tables.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Wetlands

34. In compliance with the FERC Procedures, confirm that there are no temporary access roads proposed in wetlands. Additionally, for existing permanent access roads in a wetland, confirm that Mountain Valley would not do any improvements to the portions of these roads that occur in wetlands or provide justification for why improvements are needed in wetlands.

Response:

The Project is currently evaluating the temporary access roads proposed for use during construction and will provide updated information within the Supplemental Information Package to be submitted in March 2019. Should temporary wetland impacts be proposed within temporary access roads, the Project will request an alternative measure to the FERC Procedures. For each request, the Project will also provide justification as to why wetland impacts cannot be avoided and additional measures to be implemented to minimize impacts.

The Project will also provide an update on its permanent access roads within the Supplemental Information Package to be submitted in March 2019. For existing permanent access roads within wetlands, the Project confirms that no improvements to the portions of these roads that occur within wetlands will occur.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

Wetlands

35. Update appendix 2-B to include:

- a. revised impact acreage to wetlands that are indicated as delineated by desktop analysis to include impact acreage based on actual field survey data where surveys have been completed; and
- b. impact acreage (construction and operation) to 2 decimal places for all impacts that are less than 1 acre in size.

Response:

The Project will provide an updated Appendix 2-B to include revised wetland impact acreages and report impact acreage to 2 decimal places for all impacts that are less than 1 acre in size within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 2 – Water Use and Quality

HDD Contingency Plan

36. Revise the Project HDD Contingency Plan to be consistent with FERC’s Draft Guidance for Horizontal Directional Drill Monitoring, Inadvertent Return Response, and Contingency Plans (Docket No. AD19-6) and include the information listed below.

- a. Describe visual and pedestrian monitoring that would occur during HDD activities, including frequency of monitoring and documentation that would be maintained.
- b. Provide a list of HDD drilling fluid additives proposed for use, as known, as well as the safety data sheets for these additives. Include within the HDD Contingency Plan a commitment that any additional drilling fluid additives would be pre-approved (by FERC) and would comply with all permit requirements and applicable regulations.
- c. Describe and quantify monitoring and sampling of drilling fluid physical properties during HDD activities (e.g., fluid weight, viscosity, sand content, pH).
- d. Describe any restrictions for equipment use and clearing to access and clean up an IR in uplands, wetlands, and waterbodies.
- e. Address procedures to monitor, secure landowner permission, obtain the necessary environmental and cultural resource clearances, and obtain the required FERC variances to access and restore affected resources and/or areas that are outside of approved workspaces, or not directly accessible without an approved workspace variance.
- f. Confirm that a down-hole annular pressure tool would be utilized during the HDD pilot hole drilling phase to ensure that the drilling contractor can respond to a loss and/or spike in drilling fluid pressure, potential hydrofracture, and IR at the ground surface or provide suitable alternative methods for monitoring the borehole annular pressure during pilot hole drilling.
- g. Include measures to be taken if an IR occurs in a wetland.
- h. With regard to the HDD Contingency Plan in section 6.0, which states “the bentonite used in the drilling process will be either disposed of at an approved disposal facility or recycled in an approved manner,” clarify:
 - i. if this statement is referencing the disposal of excess drilling fluid, rectify the discrepancy with the statement in RR1 section 1.2.2.1 (e) that states “the Project will dispose of all HDD cuttings and fluids at approved disposal facilities”; and
 - ii. what Mountain Valley would consider “an approved manner” of disposal for recycling.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Response:

The Project's HDD Contingency Plan has been revised to be consistent with FERC's Draft Guidance for Horizontal Directional Drill Monitoring, Inadvertent Return Response, and Contingency Plans (Docket No. AD19-6) and is provided herein as Attachment 36-1 – HDD Contingency Plan.

- a. Please refer to Section 6.2 of the revised HDD Contingency Plan.
- b. The Project has updated the Contingency Plan to include the specified commitment. The Project commits to allowing only the use of NSF International/American National Standards Institute (NSF/ANSI) 60 Drinking Water Treatment Chemicals-Health Effects compliant HDD drilling fluid additives (or equivalents) alone or in combination:
 - Accu-Vis
 - Barite
 - Clay Cutter Dry
 - Clay Cutter Pro
 - Clay Cutter
 - Insta-Vis Plus
 - Multi-Seal
 - Soda Ash
 - Sodium Bicarbonate
 - Super Thin
 - Versafoam Plus

Copies of the material safety data sheets for all of these additives are provided within Appendix A of the revised HDD Contingency Plan.

- c. Please refer to Section 5.2 of the revised HDD Contingency Plan.
- d. Please refer to Section 7.0 of the revised HDD Contingency Plan.
- e. Please refer to Section 7.4 of the revised HDD Contingency Plan.
- f. Please refer to Section 6.1 of the revised HDD Contingency Plan.
- g. Please refer to Section 7.3 of the revised HDD Contingency Plan.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

- h. Please refer to Section 5.3 of the revised HDD Contingency Plan for additional information regarding drilling fluid disposal. The statement in Resource Report 1, Section 1.2.2.1(e) should be modified in accordance with the language below. The reference to recycling bentonite is related to the active drilling process. Should, after the removal of cutting, bentonite slurry remains, it may be re-used in the active HDD process. The Project will dispose of all HDD cuttings and excess fluid at approved disposal facilities.
- i. Please refer to Section 5.3 of the revised HDD Contingency Plan for a description of the Project's proposed methods for disposal of HDD cuttings and excess drilling fluids.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Fishery Resources

37. File all aquatic survey reports and consultations with federal and state agencies not yet filed.

Response:

The Project plans to conduct surveys for aquatic species, primarily mussels, during spring 2019. The Project will file survey results with FERC and affected agencies upon completion of surveys.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Fishery Resources

38. In table 3.2-2, clarify that the information source for waterbodies with potential for mussels in table note b/ is West Virginia Division of Natural Resources, 2018. Provide the sources and citations for the same information in Virginia and North Carolina.

Response:

The reference to "West Virginia Division of Natural Resources, 2018" in Table 3.2-2 is incorrect and should be removed from the table. The references for Virginia and North Carolina should be updated to reflect respective agency coordination's in table note b/: Sources of concern are derived from: initial consultation with North Carolina Wildlife Resources Commission and USFWS – Raleigh Field Office (3 July 2018), communications with North Carolina Wildlife Resources Commission (10 August 2018), communications with Virginia Department of Game & Inland Fisheries (25 September 2018), and communications with Virginia Department of Conservation and Recreation (8 June 2018). A revised Table 3.2-2 has been included as Attachment 38-1.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Fishery Resources

39. In section 3.2.4.1, state the appropriate size for screens used on water intakes to prevent crushing, entrainment, or entrapment of mussels and fishes using the citation provided or other citations available (provide the citation if another is used).

Response:

Where needed the Project will utilize temporary, floating, screened intake pumps with a screen size no larger than 4.7625 millimeters (0.1875 in) and preferably placed in water depths of 0.9 meter (3 ft) or greater. Intakes are designed to limit the through-screen approach velocity to 0.1524 meter per second (0.5 ft /sec) or less. This screen size is based on guidance from the West Virginia Department of Environmental Protection (WVDEP 2017) and is also referenced in its Entrainment and Impingement Prevention BMP (WVDEP 2015), and was chosen because the Project is not located in areas with anadromous fishes where specific guidance for Virginia exists.

References:

WVDEP. 2017. West Virginia Department of Environmental Protection - Division of Water and Waste Management and West Virginia Division of Natural Resources - Wildlife Resources Section review of Mountain Valley Pipeline, LLC's request for West Virginia Natural Streams Preservation Act Permit to cross the Greenbrier River. July 21, 2017, NSP-17-0001. Available at <http://dep.wv.gov/WWE/Programs/wqs/Documents/401%20Program/NSP170001signed.pdf>.

WVDEP. 2015. West Virginia Department of Environmental Protection, Office of Oil & Gas, Water Management Plan Guidance; Best Management Practices for Entrainment and Impingement Prevention. Revised August 18, 2015. Available at https://dep.wv.gov/oil-and-gas/Water%20Management/Documents/Entrainment%20and%20Impingement%20Prevention%20BMPs_Final.pdf.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Fishery Resources

40. In section 3.2.4.3, provide additional details regarding Mountain Valley’s plans for waterbody crossings restoration, including clarifying whether Mountain Valley would strictly follow only the FERC’s Procedures or would develop a Project-specific Restoration and Rehabilitation Plan. If the latter, file the plan.

Response:

Additional details regarding the Project’s plan for waterbody crossings and restoration are provided in Resource Report 2, Sections 2.3.1.4 and 2.3.6.1. As stated in Section 2.3.1.4, for all waterbody crossings, the Project will follow the FERC Procedures and the Project-specific Erosion and Sediment Control Plan (“E&SCP”), as well as best management practices (“BMPs) to limit water quality and aquatic resource impacts during and following construction across all waterbodies. In Section 2.3.6.1, the Project states that it will implement the FERC Plan and Procedures such that restoration shall be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands, revegetation is successful, and proper drainage has been restored. Federal and State permitting erosion and sediment control requirements will also be followed.

A standalone Restoration and Rehabilitation Plan will not be prepared for the Project. See the response for Question#51 within this response package for further details.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Vegetation and Wildlife

41. Identify whether Mountain Valley would clear vegetation for the path of the HDD guide wire and provide details if so.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Vegetation and Wildlife

42. Provide location and acreage and/or linear feet of tree trimming, including along existing access roads. Include timing restrictions and whether sensitive or listed species would be affected (e.g., bats).

Response:

The Project will provide the location and acreage and/or linear feet of tree trimming, including along existing access roads and timing restrictions within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Vegetation and Wildlife

43. Clarify if VDCR and North Carolina Natural Heritage Program (NCNHP) have approved the Exotic and Invasive Plant Species Control Plan. The plan states that Mountain Valley would monitor the right-of-way “during and post-construction”. Clarify that timeframe and any state-specific herbicide requirements/considerations.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Vegetation and Wildlife

44. Describe construction protocols that Mountain Valley would implement to minimize wildlife injury or death within the construction corridor (e.g., prior to start of construction day, trench and equipment would be inspected to ensure no wildlife present) in section 3.3.4.

Response:

During periods of active construction, the Project will implement measures to minimize wildlife injury or mortality within construction workspace areas. These measures may include but are not limited to the following:

- Pre-construction training of personnel regarding the potential presence of wildlife within the Project area and protocols for delaying or stopping work should wildlife be present within active workspace areas;
- Installation of escape ramps within open trench areas to allow for wildlife to exit and not become trapped;
- Prior to the start of each construction day, inspection of the workspace and trench in active construction areas to ensure that wildlife is not present. If wildlife is present, construction activities will be delayed in that area to allow the animals present to move outside of the workspace;
- Prior to the start of each construction day, equipment left within the workspace will be inspected to ensure that no wildlife is present within the equipment;
- Direct handling of wildlife will not be allowed with the exception of relocation of injured or immobile animals by the environmental inspector(s);
- No direct handling of any state or federal-listed rare species will occur unless otherwise approved by the applicable regulatory agencies;
- Equipment speed will be regulated on access roads to minimize the potential for wildlife mortality;
- The Project will dispose of construction debris according to federal, state, and local regulations, and construction crews will practice good housekeeping to prevent garbage from attracting opportunistic wildlife and predators.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Vegetation and Wildlife

45. We do not believe that spacing wildlife escape ramps at a distance of one per mile is sufficient to protect wildlife. Supplement section 3.3.4 by providing one of the following:

- a. indicate why Mountain Valley would not commit to trench wildlife escape ramps at 50-foot intervals; or
- b. indicate a more appropriate escape route interval (e.g. every 500, 1,000, or 1,500 feet).

Response:

The Project consulted with VDGIF on the Mountain Valley Pipeline Project to determine appropriate spacing for wildlife escape ramps. The Project is committed to adhering to the spacing interval recommended by VDGIF for that project across the entire Southgate Project, specifically installation of a ramp approximately every 0.1 mile (528 feet). The Project will install the wildlife escape ramps in a manner intended to intercept wildlife traveling in either direction within the trench (a ramp in both directions intersecting at the same point at the top of the trench).

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Vegetation and Wildlife

46. Provide the following information regarding artificial lighting used during construction and operation:

- a. measures for minimizing impacts of light pollution from artificial lighting on wildlife during construction;
- b. description of existing artificial lighting associated with the industrial development adjacent to the proposed Lambert Compressor Station (i.e., describe whether artificial lighting is already present in the vicinity of where the compressor station would be located); and
- c. confirmation that artificial lighting would only be installed at the Lambert Compressor Station for use during operations (i.e., there would be no lighting at the MLV or interconnection sites).

Response:

- a. The Project anticipates that effects associated with use of artificial lighting on wildlife during construction and operation are expected to be minimal given the Project's limitation of night-time construction activities to the extent practicable. Artificial lighting sources used during construction will consist mainly of light plants that are equipped with shielding to focus lighting to the work areas and minimize light pollution outside of the work areas. Artificial lighting from equipment headlights are focused downward in front of the equipment and will not cause significant light pollution outside of the work areas. Additionally, night-time construction operations would not allow lighting to project upward to every extent practicable, and any security lighting would be down-shielded.
- b. The industrial development located approximately 600 feet to the north of the proposed Lambert Compressor Station consists of a Transcontinental Gas Pipe Line Company, LLC natural gas compressor station. The existing artificial lighting is similar to that which is proposed for the Lambert Compressor Station and appears to be minimized to that necessary to conduct night-time operation of the existing compressor station.
- c. Permanent outdoor lighting at the Lambert Compressor Station, and any of the interconnects, would be limited to the minimum amount required for security during unmanned nighttime operation. The MLV sites along the pipeline will not be equipped with artificial lighting. The interconnection sites will be equipped with artificial lighting; however, the lighting will only be utilized when personnel are present within the sites during night conditions. During normal operating conditions, the lighting will not be used.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Vegetation and Wildlife

47. Section 3.3.3.2 states approximately 18.5 acres of forest would be cleared within the Virginia Piedmont Forest Block Complex Important Bird Area (IBA), of which 10.5 acres would return to forested conditions over time. This statement implies that 8.0 acres of forest would be permanently converted to non-forested habitat; however, section 3.3.3.2 states that 8.2 acres of forest cover would be converted to non-forested cover within the IBA. Clarify this discrepancy.

Response:

The Project will provide an updated acreage of forested area to be cleared within the Virginia Piedmont Forest Block Complex Important Bird Area (IBA) within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Vegetation and Wildlife

48. Explain how Mountain Valley would minimize forest clearing in the North Carolina Forest Legacy areas identified in section 3.3.2 and discuss whether a minor reroute would be possible to avoid crossing the Piedmont Land Conservancy Easement at MP 37.7.

Response:

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 (see below). As indicated in Resource Report 3 the vegetation consists of small saplings, which will be cleared for construction.

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

**Responses to Environmental Information Request
Dated February 13, 2019**



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

**Responses to Environmental Information Request
Dated February 13, 2019**



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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Vegetation and Wildlife

49. Clarify the statement in section 3.3.3.2, “Project-specific MBSC [Migratory Bird Species of Concern] most commonly use the following National Land Cover Database (“NLCD”) land covers and aerial photography as preferred nesting habitat:...” and provide a citation to support this statement. The citations currently provided only cite the NLCD.

Response:

These broad land cover classes (e.g., deciduous forest; grassland/herbaceous) are an umbrella for specific habitat types (e.g., oak-hickory forest; large [>100 hectare] grasslands). Birds of North America's online database (<https://birdsna.org>) includes comprehensive species accounts that describe life history, habitat preferences, conservation status, and other important information related to North American birds. Species accounts for each Project-specific MBSC were reviewed to determine the appropriate habitat types (and, therefore, land covers) selected by each species.

A list of articles referenced are provided:

McAuley, D. G., D. M. Keppie, and R. M. Whiting Jr. (2013). American Woodcock (*Scolopax minor*), version 2.0. In *The Birds of North America* (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.100>

Buehler, D. A. (2000). Bald Eagle (*Haliaeetus leucocephalus*), version 2.0. In *The Birds of North America* (A. F. Poole and F. B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.506>

Slater, G. L., J. D. Lloyd, J. H. Withgott, and K. G. Smith (2013). Brown-headed Nuthatch (*Sitta pusilla*), version 2.0. In *The Birds of North America* (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.349>

Cink, C. L., P. Pyle, and M. A. Patten (2017). Eastern Whip-poor-will (*Antrostomus vociferus*), version 3.0. In *The Birds of North America* (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. Retrieved from *Birds of North America*: <https://birdsna.org/Species-Account/bna/species/whip-p1>

Vickery, P. D. (1996). Grasshopper Sparrow (*Ammodramus savannarum*), version 2.0. In *The Birds of North America* (A. F. Poole and F. B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

<https://doi.org/10.2173/bna.239>

McDonald, M. V. (2013). Kentucky Warbler (*Geothlypis formosa*), version 2.0. In *The Birds of North America* (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.324>

Poole, A. F., P. E. Lowther, J. P. Gibbs, F. A. Reid, and S. M. Melvin (2009). Least Bittern (*Ixobrychus exilis*), version 2.0. In *The Birds of North America* (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.17>

Brennan, L. A., F. Hernandez, and D. Williford (2014). Northern Bobwhite (*Colinus virginianus*), version 2.0. In *The Birds of North America* (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.397>

Nolan Jr, V., E. D. Ketterson, and C. A. Buerkle (2014). Prairie Warbler (*Setophaga discolor*), version 2.0. In *The Birds of North America* (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.455>

Petit, L. J. (1999). Prothonotary Warbler (*Protonotaria citrea*), version 2.0. In *The Birds of North America* (A. F. Poole and F. B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.408>

Frei, B., K. G. Smith, J. H. Withgott, P. G. Rodewald, P. Pyle, and M. A. Patten (2017). Red-headed Woodpecker (*Melanerpes erythrocephalus*), version 2.1. In *The Birds of North America* (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.rehwoo.02.1>

Evans, M., E. Gow, R. R. Roth, M. S. Johnson, and T. J. Underwood (2011). Wood Thrush (*Hylocichla mustelina*), version 2.0. In *The Birds of North America* (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.246>

Sedgwick, J. A. (2000). Willow Flycatcher (*Empidonax traillii*), version 2.0. In *The Birds of North America* (A. F. Poole and F. B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.533>

Watts, B. D. (2011). Yellow-crowned Night-Heron (*Nyctanassa violacea*), version 2.0. In *The Birds of North America* (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bna.161>

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Vegetation and Wildlife

50. Clarify the following regarding MBSC in section 3.3.3.3:

- a. the date range referred to as “peak” MBSC breeding season;
- b. descriptions of the threats to the Project MBSC (i.e., why they have the conservation status they do, as noted in table 3.3-3);
- c. acreage of suitable/occupied habitat that would be affected for each species;
- d. provide a citation that supports the statement in section 3.3.3.3 that a 0.6-mile buffer reflects the distance at which noise impacts are unlikely to disrupt migratory bird nesting behavior;
- e. whether Virginia state agencies would be solicited to determine appropriate conservation measures to minimize impacts on MBSC (currently only the U.S. Fish and Wildlife Service [FWS] and North Carolina Wildlife Resources Commission [NCWRC] are listed);
- f. what the framework would be for how this agency coordination would occur and be implemented (i.e., will Mountain Valley develop a Migratory Bird Conservation Plan to codify the steps that would be taken to minimize impacts on the greatest extent practicable); and
- g. if a Migratory Bird Conservation Plan will be developed, provide the date that it will be filed with the Commission.

Response:

- a. Peak nesting season is considered May 1st to August 15th, which accommodates the time of year Project-specific MBSC exhibit the most nesting activity. Breeding guidelines produced by the Virginia Breeding Bird Atlas 2 and species accounts from Birds of North America (<https://birdsna.org>) were referenced to determine regional nesting phenology.
- b. The Project reviewed the North Carolina Wildlife Action Plan (2015) to evaluate threats that are most closely aligned to the types of activities proposed for the Project. As a result, the Project revised Table 3.3-3 to address risk from transportation and travel corridors, and risk from human intrusions and disturbance. This information was submitted to the FERC docket on January 24, 2019 (accession number 20190124-5165; available at http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14739079).
- c. The Project will provide updated acreage amounts of suitable/occupied habitat that would be affected for each species within the Supplemental Information Package to be submitted in March 2019.

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

Responses to Environmental Information Request
Dated February 13, 2019

- d. Noise level of 60 decibels (dBA; A scale) is typically used, albeit inappropriately (Caltrans 2016), as a threshold for highway noise based on concurrent, yet independent research, including avian field studies (Barrett 1996) and development of an auditory model produced by R. Dooling for the California Fish and Wildlife Service. Caltrans (2016) points out that evidence gained since the application of the 60 dBA criterion clearly indicates this threshold is likely conservative. While this particular research focuses on highway construction and noise, construction equipment used for the Project is similar to those used in highway construction. Unlike consistent noise from highways that act as a line source (i.e., origin of noise radiates from a geometric line), construction is likely to be intermittent and acts as a point source. Noise attenuation for a line source is a drop off rate of 3dB per doubling of distance, while attenuation for point source noise is at a rate of 6 dB per doubling of distance (Caltrans 2016). Equipment likely to be used for construction with the loudest noise levels were evaluated using information from FHWA (2006). Operation of a pile driver (impact) produces a noise measured at 95 dB at 15 meters from the source of origin. By doubling distance from the point source, the noise is expected to decrease to 59 dB at approximately 960 meters. A 965-meter (0.6-mi) radius was selected as a conservative estimate for potential influence of noise on nesting migratory birds.

Citations:

Barrett, D. E. (1996). "Traffic-noise impact study for Least Bell's vireo habitat along California State Route 83," Transportation Research Record: Journal of the Transportation Research Board 1559, 3-7.

The California Department of Transportation. 2016. Technical Guidance for Assessment and Mitigation of the Effects of Highway and Road Construction Noise on Birds. June. (Contract 43A0306.) Sacramento, CA. Prepared by ICF International, Sacramento, CA, Robert Dooling, Gaithersburg, MD, and Arthur Popper, Silver Spring, MD.

Federal Highway Administration. 2006. Roadway Construction Noise Model User's Guide. U.S. Department of Transportation, Federal Highway Administration, FHWA-HEP-05-054 DOT-VNTSC-FHWA-05-01, 22 pp.

- e. The Project continues to coordinate with VDGIF and NCWRC regarding migratory birds. NCWRC provided comments on MBSC on Nov 5, 2017, and VDGIF provided comments on MBSC and avian resources on November 15, 2018; the Project recently addressed these comments, which can be found in accession number 20181207-5224 (available at http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14739079).
- f. Information regarding conservation measures associated with migratory birds is provided in Resource Report 3. The USFWS, VDGIF and NCWRC have reviewed information provided regarding migratory birds and provided comments. The Project recently addressed these comments, see accession number 20181207-5224 (available

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

**Responses to Environmental Information Request
Dated February 13, 2019**

- at: http://elibrary.ferc.gov/0/Idmws/file_list.asp?document_id=14726992).
- g. At this time, the Project does not intend to develop a stand-alone migratory bird conservation plan.
 - h. At this time, the Project does not intend to develop a stand-alone migratory bird conservation plan.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Vegetation and Wildlife

51. Provide a right-of-way restoration plan incorporating guidance received from the U.S. Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS), VDCR, NCWRC, and other “applicable regulatory agencies” regarding seed mixes and other restoration activities that would be implemented in restoring the pipeline right-of-way, as noted in section 3.3.4.

Response:

A standalone Restoration and Rehabilitation Plan will not be prepared for the Project because the various tasks associated with restoration and rehabilitation of the Project will be submitted for review by the appropriate Federal, state, and local government regulatory authorities in the respective resource reports, permit applications, or stand-alone reports required for authorization to proceed to construction. Specific locations where this information can be found are listed below, and seed mixes will be filed with the Implementation Plans.

A project specific *Annual Standards & Specifications* plan has been submitted to the Virginia Department of Environmental Quality (DEQ). Erosion and sediment control plans will be submitted to the Virginia DEQ and North Carolina DEQ. Within these documents, recommended seed mixes will be listed with application rates for all land uses, habitat types, and slope conditions encountered by the project. The Virginia Department of Conservation and Recreation (VDCR) and the North Carolina Wildlife Resources Commission (NCWRC) is being consulted for input on final seed mixes. Invasive species control is included along with general construction sequencing, such as topsoiling and re-contouring the right-of-way. Construction details for stream and wetland restoration, right-of-way restoration, and other practices are provided as well.

An *Exotic and Invasive Plant Species Control Plan* was created to identify potential undesirable vegetation associated with the Project and to also outline methods to prevent recruitment and spread of exotic and invasive species. This plan was submitted with the FERC January 2019 supplemental filing.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

A variance application has been filed with the Jordan Lake Watershed Association for crossings within riparian buffer zones. The North Carolina erosion and sediment control plan will be modified with the updated crossing details per the approved variance application. The restoration methods that will be required will also be outlined in the approval from the Jordan Lake Watershed Association.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Endangered, Threatened, and Special Concern Species

52. Provide results of pending surveys and consultations with federal and state agencies regarding listed species.

Response:

The Project recently submitted its mussel study plans to USFWS, VDGIF, VDCR and NCWRC for review and comment, and anticipates beginning surveys in spring 2019. The study plans, and additional agency coordination are provided in Attachment 52-1. Results of other pending surveys and consultations with federal and state agencies regarding listed species will be provided upon completion.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Endangered, Threatened, and Special Concern Species

53. For the species descriptions for federal and state-listed species (including plants) listed in section 3.5, provide specifics for the species, such as (but not limited to) the counties/waterbodies in Virginia and North Carolina in which the species are known to occur, known local population levels, locations within the vicinity of the Project where the species have been documented (or the closest location if they are not known in the vicinity of the Project), specific locations/extents along the Project right-of-way that contain appropriate habitat, and the likelihood they would be affected, what impacts would be, etc.

Response:

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

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Endangered, Threatened, and Special Concern Species

54. Provide a completed Streamline Consultation Form for the 4(d) rule for the northern long-eared bat.

Response:

Northern long-eared bat was not captured during Project mist net surveys. There are no known maternity roosts and no known hibernacula near the Project. Therefore, unless requested by USFWS, a streamlined consultation form will not be prepared for the Project.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Endangered, Threatened, and Special Concern Species

55. With regard to the correspondence received from the VDCR on September 5, 2018, provide correspondence from the VDGIF that the Project's proximity to the Transco Road Net Conservation would not significantly affect the state endangered tri-colored bat.

Response:

The Project will continue to coordinate with VDGIF and VDCR regarding the Transco Road Net Conservation Site. Updated agency consultation is provided as part of Attachment 52-2 of Question#52 within this response package.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Endangered, Threatened, and Special Concern Species

56. In section 3.5.2.1, confirm that the rare plant species listed here encompass all of the rare piedmont plants requested by the VDCR to be inventoried in correspondence dated September 5, 2018.

Response:

On September 5, 2018 the VDCR recommended inventory within the 1:24000 Brosville quadrangle map for Piedmont babrara's-buttons, downy phlox, and American bluehearts, as well as an inventory for rare piedmont plants in the following quadrangle maps: Brosville, Chatham, Mount Hermon, Northeast Eden, Spring Garden and Whitmell. The Project will continue to coordinate with VDCR regarding state rare species.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Endangered, Threatened, and Special Concern Species

57. Provide correspondence from the VDCR regarding Mountain Valley's approach to minimizing impacts on American bluehearts, downy phlox, and Piedmont Barbara's-button. Provide correspondence from the NCNHP regarding Mountain Valley's approach to minimizing impacts on cliff stonecrop.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 3 – Fish, Wildlife, and Vegetation

Endangered, Threatened, and Special Concern Species

58. Provide updated correspondence from the FWS approving the approach to minimizing impacts on small-whorled pogonia and smooth coneflower.

Response:

Neither small whorled pogonia nor smooth coneflower were observed in the 2018 survey for federal plant species. Additional surveys for federal plant species are planned for 2019. If these species are found in the 2019 surveys, the Project will consult with USFWS to develop appropriate conservation measures.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

59. File the reviews by the State Historic Preservation Offices (SHPO) of Virginia and North Carolina, and interested Indian Tribes and other Native Americans of Mountain Valley's Plan for Unanticipated Discoveries of Historic Properties and Human Remains attached as appendix 4-C to RR4 included in the Project application to the FERC.

Response:

The Virginia SHPO accepted the *Project Plan for Unanticipated Discoveries of Historic Properties and Human Remains* in a letter dated September 14, 2018, which has been previously filed with the FERC on November 6, 2018.

The North Carolina SHPO accepted the *Project Plan for Unanticipated Discoveries of Historic Properties and Human Remains* in a letter dated September 6, 2018, which has been previously filed with the FERC on November 6, 2018.

As of this filing, no Native American tribes have provided the Project with comments on the *Project Plan for Unanticipated Discoveries of Historic Properties and Human Remains*. The Project is aware that the FERC has recently received comments from the Monacan Indian Nation (accession number 20190221-5108; available at: https://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20190221-5108) and will consider those comments during Project development.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

60. Provide any updated communications between Mountain Valley and the SHPOs, other state agencies, Native Americans and Indian Tribes, conducted after the Project application was filed with the FERC.

Response:

Updated communications between the Project and the SHPOs, other state agencies, Native Americans and Indian tribes, conducted after the Project application was filed with the FERC on November 6, 2018 are included in Attachment 60-1.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

61. File copies of all Work Plans, Research Designs, Survey and Evaluation Protocols, testing, avoidance, treatment plans, and addendum reports for archaeological and historic architectural resources produced by Mountain Valley to date, and file reviews of those plans and reports by the SHPOs, and interested Native Americans and Indian Tribes.

Response:

No additional Work Plans, Research Designs, Survey and Evaluation Protocols, testing, avoidance, or treatment plans have been produced since the Project application was filed with the FERC on November 6, 2018.

Revised Final Phase I archaeological survey reports for Virginia and North Carolina, and the initial Phase II Testing/Deep Testing Report for Virginia are included in Attachment 61-1.

Previously unfiled SHPO reviews have been included as part of Attachment 60-1 of Question #60 within this response package. No tribal reviews of plans or reports have been received as of February 22, 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

62. File copies of all pertinent communications (letters and emails) between Mountain Valley and Indian tribes and other Native Americans and state-recognized tribal organizations listed on the tables of Tribal Correspondence in Resource Report 4.

Response:

Copies of all pertinent communications as of February 22, 2019, between the Project and Indian tribes and other Native Americans and state-recognized tribal organizations listed on the tables of Tribal Correspondence in Resource Report 4 are provided in Attachment 60-1 of Question #60 within this response package.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

63. File a table that lists all Project areas (e.g., pipeline areas, aboveground facilities, staging areas, ATWS, yards, and access roads) and indicate which areas have been surveyed for cultural resources and which remain to be surveyed.

Response:

Updated versions of Tables 4.5-5 and 4.5-6 listing the cultural resources survey status of all Project areas (e.g., pipeline areas, aboveground facilities, staging areas, ATWS, yards, and access roads) will be provided within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

64. Update tables and appendices that list all previously recorded archaeological sites and historic architectural structures identified during the site file search and literature review within 0.5-mile of all Project components to include:

- a. resource number/name;
- b. cultural type;
- c. milepost;
- d. distance (in feet) from component;
- e. recorder/organization;
- f. date of recording;
- g. recorder evaluation; and
- h. SHPO evaluation.

Response:

The Project will provide updated versions of Tables 4.5-1, 4.5-2, 4.5-3, and 4.5-4 containing these data within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

65. File a list of all archaeological and historic architectural sites identified by Mountain Valley within the area of potential effects (APE) by milepost.

Response:

The Project will provide this information within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

66. RR4 states that the indirect APE is a 450-foot-wide corridor centered on the pipeline. However, the historic architectural survey reports indicates that the indirect APE is 0.5-mile on each side of centerline. Clarify this discrepancy.

Response:

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.”*

The Virginia Architectural Survey Report (Appendix 4-F) provides a definition of the indirect effects APE consist with the Resource Report 4 definition on pages 1 and 29 (see extracts below), but also includes references to the APE as *“within 0.5-mile of the project”* on pages i and 23. The latter references will be corrected in the Final Report to clarify that the 0.5-mile distance generally constitutes the maximum extent of the indirect effects APE.

Similarly, the North Carolina Architectural Survey Report (Appendix 4-G) provides a definition of the indirect effects APE consist with the Resource Report 4 definition on pages 1 and 37 (see extracts below), but also includes references to the APE as *“within 0.5-mile of the project”* on pages i and 31. The latter references will be corrected in the Final Report to clarify that the 0.5-mile distance generally constitutes the maximum extent of the indirect effects APE.

Extracts

Virginia Architectural Survey Report (Appendix 4-F) page i:

The Project Area of Potential Effect (APE) for historic structures and other aboveground resources (the indirect effects APE) is defined as the area within which any resources might be within view of proposed vegetation clearing or aboveground construction, or otherwise potentially affected by proposed Project activities. This APE will minimally consist of a 450-foot wide corridor centered on the proposed pipeline centerline, 250-foot corridors centered on access road centerlines, and an area extending 0.5 mile outside the proposed compressor station site. The APE will be terminated at 0.5

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

**Responses to Environmental Information Request
Dated February 13, 2019**

mile from the proposed pipeline corridor or appurtenance, or where vegetation and/or topography obstructs lines of sight.

Virginia Architectural Survey Report (Appendix 4-F) page 29:

The APE minimally consists of a 450-foot wide corridor centered on the proposed pipeline centerline, 250-foot corridors centered on access road centerlines, and an area extending 0.5 mile outside the proposed compressor station site, and was extended as necessary to encompass longer viewsheds where present. The APE was terminated at 0.5 mile from the proposed pipeline corridor or appurtenance, or where vegetation and/or topography obstructs lines of sight.

North Carolina Architectural Survey Report (Appendix 4-G) page i:

The Project Area of Potential Effect (APE) for historic structures and other aboveground resources (the indirect effects APE) is defined as the area within which any resources might be within view of proposed vegetation clearing or aboveground construction, or otherwise potentially affected by proposed Project activities. This APE will minimally consist of a 450-foot wide corridor centered on the proposed pipeline centerline, 250-foot corridors centered on access road centerlines, and an area extending 0.5 mile outside the proposed compressor station site, and will be extended as necessary to encompass longer viewsheds if present. The APE will be terminated at 0.5 mile from the proposed pipeline corridor or appurtenance, or where vegetation and/or topography obstructs lines of sight.

North Carolina Architectural Survey Report (Appendix 4-G) page 37:

The APE minimally consists of a 450-foot wide corridor centered on the proposed pipeline centerline, 250-foot corridors centered on access road centerlines, and an area extending 0.5 mile outside the proposed compressor station site (in Virginia), and was extended as necessary to encompass longer viewsheds where present. The APE was terminated at 0.5 mile from the proposed pipeline corridor or appurtenance, or where vegetation and/or topography obstructs lines of sight.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

67. With regards to tables 4.5-1, 4.5-2, 4.5-3, and 4.5-4 in RR4, file a new table that lists all previously recorded archaeological and historic architectural sites that were located during Mountain Valley's surveys. The new table should list site number/name, cultural type, milepost or Project element (i.e., access road), original recorder/organization, original evaluation, Mountain Valley's new evaluation, and Mountain Valley's recommendation for future work.

Response:

The Project will provide updated versions of Tables 4.5-1, 4.5-2, 4.5-3, and 4.5-4 containing these data within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

68. The narrative text of the Virginia archaeological survey report mentioned the following previously recorded sites 45PY258, 259, 263, 265, 267, 273, 277, 279, 280, 334, 373, and 374 as being located during the surveys. However, these sites are missing from tables 1.1 and 3.1 of the survey report. File information about these sites and explain why they were missing from the tables.

Response:

Information on these sites is as follows:

44PY0258 is a previously recorded site that is outside the direct effects APE and is listed as such in Table 3.1. As it is outside the APE, it is not listed in Tables i.1 or 6.1 or discussed in the text.

44PY0259 is a previously recorded site that is mapped inside the direct effects APE (but was not listed as such in Table 3.1). It was not relocated by Project surveys (p. 65), and thus is not listed in Tables i.1 or 6.1. Table 3.1 has been updated in the Final survey report (provided in Attachment 61-1 of Question#61 within this response package) to indicate this site as mapped within the APE.

44PY0263 is a previously recorded site that is mapped inside the direct effects APE and is listed as such in Table 3.1. It was not relocated by Project surveys (p. 45) and thus is not listed in Tables i.1 or 6.1.

44PY0265 is a previously recorded site that is mapped inside the direct effects APE and is listed as such in Table 3.1. It was not relocated by Project surveys (p. 178) and thus is not listed in Tables i.1 or 6.1.

44PY0267 is a previously recorded site that is mapped inside the direct effects APE and is listed as such in Table 3.1. It was not relocated by Project surveys (p. 90) and thus is not listed in Tables i.1 or 6.1.

44PY0273 (Architectural Resource 071-5227) is a previously recorded historic cemetery that is mapped inside the direct effects APE and is listed as such in Table 3.1. It was relocated by Project surveys (p. 79); as noted in the text this resource (and other historic cemeteries) are discussed in Project reports as historic architectural resources. For this reason, it is not listed in Tables i.1 or 6.1.

44PY0277 is a previously recorded site that is mapped inside the direct effects APE and is listed as such in Table 3.1. It was not relocated by Project surveys (p. 161) and thus is not listed in Tables i.1 or 6.1.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

44PY0279 is a previously recorded site that is mapped inside the direct effects APE and is listed as such in Table 3.1. It was not relocated by Project surveys (p. 98) and thus is not listed in Tables i.1 or 6.1.

44PY0280 is a previously recorded site that is mapped inside the direct effects APE and is listed as such in Table 3.1. It was not relocated by Project surveys (p. 90) and thus is not listed in Tables i.1 or 6.1.

44PY0334 is a previously recorded site that is mapped inside the direct effects APE and is listed as such in Table 3.1. It was not relocated by Project surveys (p. 195-196) and thus is not listed in Tables i.1 or 6.1.

44PY0373 is a previously recorded site that is mapped inside the direct effects APE and is listed as such in Table 3.1. It was not relocated by Project surveys (p. 198) and thus is not listed in Tables i.1 or 6.1.

44PY0374 is a previously recorded site that is mapped inside the direct effects APE (but was not listed as such in Table 3.1). It was not relocated by Project surveys (p. 197) and thus is not listed in Tables i.1 or 6.1. Table 3.1 has been updated in the Final survey report (provided in Attachment 61-1 of Question#61 within this response package) to indicate this site as mapped within the APE.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

69. The narrative text of the North Carolina archaeological survey report mentioned 31RK129 as a previously recorded site that was located during the surveys, but it is missing from tables 1.1 and 3.1 of the survey report. File information about site 31RK129 and explain why it was missing from the tables.

Response:

Site 31RK129 is correctly described as a previously recorded site that was not relocated during the surveys in the text of the North Carolina archaeological survey report (pp. 45 and 132), and for that reason is not included in Tables i.1 and 7.1 of the survey report or in Resource Report 4 Table 4.5-8. Site 31RK129 is shown in Table 3.1 of the North Carolina archaeological survey report since it is a previously recorded resource.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

70. RR4 states that there are 94 previously recorded historic architectural sites within 0.5-mile of the pipeline in North Carolina. But the historic architectural survey reports state that there are 101 previously recorded sites in the APE. Clarify this discrepancy.

Response:

As stated in Resource Report 4, there are 94 previously recorded historic architectural resources within 0.5-mile of the Project in North Carolina, but 98 resources are listed in Table 4.5-4 in Resource Report 4. Both counts should be 101, as shown in Table 3.1 of the North Carolina architectural history report. Three resources were inadvertently omitted from Table 4.5-4 in Resource Report 4:

- RK1389 – House, Highway 29 (unassessed)
- RK1424 – House (unassessed)
- AM1589 – Hal Isley House (unassessed).

An updated version of Table 4.5-4 will be filed within the Supplemental Information Package to be submitted in March 2019

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

71. File copies of site forms for the historic architectural sites recorded in North Carolina.

Response:

Site forms for the historic architectural sites recorded in North Carolina are included in Attachment 71-1.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

72. For all archaeological and historic architectural sites, file plan-view maps showing the site boundaries in relation to the construction right-of-way or other Project elements (i.e., access roads).

Response:

The Project will provide this information within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

73. The narrative text of the Virginia archaeological survey report indicates that 22 archaeological sites were found, but table 1.1 in the report lists 24 sites. The North Carolina archaeological survey report indicates that 42 archaeological sites were found, but table 1.1 in the report lists 30 sites. Clarify these discrepancies.

Response:

The narrative text of the Draft Virginia Archaeological Survey Report (pages i, 2 and 201) indicates that 23 sites were found, and Tables i.1 and 6.1 in the report list 23 sites. The same information is provided on pages i, 2, and 201 and in Tables i.1 and 6.1 of the Final report.

The narrative text of the Draft North Carolina archaeological survey report (pages i, 2, and 261) indicates that 42 sites and 19 isolated finds were found, and Tables i.1 and 7.1 in the report list 31 sites. Those counts were incorrect. The correct counts are 32 archaeological sites and 29 isolated finds, as now provided on pages ii, 2, and 261, and in Tables i.1 and 7.1, of the Final North Carolina Archaeological Survey Report, which is included in Attachment 61-1 of Question #61 within this response package.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

74. Nineteen archaeological sites in Virginia and 10 archaeological sites in North Carolina are either potentially eligible or unevaluated. File plans to avoid those sites, or file the results of archaeological testing that leads to National Register of Historic Places (NRHP) evaluations.

Response:

Information on archaeological testing at three sites in Virginia is contained in the report titled *Phase II Archaeological Testing of Sites 44PY0271, 44PY0445, ad 44PY0451, and Supplemental Phase I Deep Testing Investigations at Three Locations for the MVP Southgate Pipeline Project, Pittsylvania County, Virginia* (Millis 2019), which is provided in Attachment 61-1 of Question #61 within this response package. NRHP eligibility evaluations and avoidance documentation and plans for additional sites will be filed within the Supplemental Information Package to be submitted in March 2019, and in subsequent filings.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

75. One historic architectural site in Virginia (Little Cherrystone Manor) and two in North Carolina (Willow Oak Plantation and Granite Mill) are listed in the NRHP. File plans to avoid these sites, or file treatment plans to resolve adverse effects.

Response:

The Project is presently evaluating avoidance or treatment options for these resources, and will file avoidance or treatment plans for these resources as they are completed.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

76. Five historic architectural sites in Virginia, and 16 in North Carolina were recommended as potentially eligible or unassessed. File plans to avoid those sites, or file the results of investigations that fully evaluate their NRHP status.

Response:

Virginia and North Carolina SHPO reviews of the November 2018 Project Phase I historic architectural reports (Appendixes 4-F and 4-G) are provided in Attachment 60-1 of Question #60 within this response package and will result in some changes to these recommendations in the Final versions of those reports.

The Project will provide the Final versions of those reports within the Supplemental Information Package to be submitted in March 2019, and will file addendum architectural history reports, as well as plans to avoid or fully evaluate eligible, potentially eligible, or unassessed architectural resources in April 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

77. There are 12 historic cemeteries found along the pipeline route. File plans to avoid those sites.

Response:

The Project will provide file plans to avoid all historic cemeteries along the pipeline route prior to June 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

78. In revisions to appendix 4-D and 4-E provide the following:
- a. clarification regarding the inconsistency of the 1-mile background search area and the 0.5-mile study area discussed in RR4;
 - b. identify the survey area, APE, and Project area as these terms are used interchangeably;
 - c. clarify the number of probes, negative and positive, for the entire survey;
 - d. clarify the counts of resources found in Chapter 6 (appendix 4-D) and Chapter 7 (appendix 4-E) and update RR4 to match; and
 - e. confirm that tribal coordination was not completed as part of the ethnographic study.

Response:

These revisions have been made to the revised Virginia and North Carolina archaeological survey reports, which are provided in Attachment 61-1 of Question #61 within this response package as appropriate. Information and citations are as follows:

- a. The Project used a 1.0-mile background search radius for both the Virginia and North Carolina survey reports, as noted on Page 35 of Appendix D and Page 9 of Appendix E, respectively. The 1.0-mile radius is explicitly required by the North Carolina SHPO, and the same radius was used in Virginia for consistency. As the FERC requested, an 0.5-mile radius in the September 24, 2018 Environmental Information Request, an 0.5-mile radius was used in the body of Resource Report 4.
- b. The Appendix 4-D and 4-E reports have been reedited for consistency in the use of the terms survey area, APE, and Project area. In general, “APE” or “direct effects APE” is now used whenever the text refers to the specific areas covered by the surveys. The term “Project vicinity” is used whenever the text refers in a general sense to the APE and its surroundings.
- c. Information on the number of probes, negative and positive, is now provided in the Management Summary (page i) of each revised Final report.
- d. All counts of resources have been checked for consistency. The relevant Resource Report 4 tables will be updated within the Supplemental Information Package to be submitted in March 2019.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

- e. The Project initiated tribal coordination in May 2018. The ethnographic study provided as an appendix to the Appendix D and E reports was based on written sources, as noted on Page 2 of each revised Final Report. As of the November 6, 2018 filing, no tribes had provided specific information relevant to the studies.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

79. Update the following tables to include the distance from construction corridor (in feet):
- a. appendix 4-D table 6.1;
 - b. appendix 4-E table 7.1;
 - c. appendix 4-F table 3.1 and table 6.1; and
 - d. appendix 4-G table 3.1 and table 7.1.

Response:

The Project will provide updated versions of Appendix 4-D Table 6.1, Appendix 4-E Table 7.1, Appendix 4-F Table 3.1 and Table 6.1, and Appendix 4-G Table 3.1 and Table 7.1 within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

80. Appendix 4-D page 33 states, “Twenty-six sites are mapped within the Project corridor (in bold), and evidence of 11 of these were found during the Project survey.” However, the numbers listed do not add up to that total. Provide information concerning the resources that were not relocated.

Response:

The Final version of the Appendix 4-D report (included as part of Attachment 61-1 of Question#61 within this response package) clarifies that twenty-seven (27) sites were mapped within the direct effects APE of which twelve (12) were relocated and fifteen (15) of which were not. The Report states on pp. 33–34 that:

“Twenty-seven sites are mapped within the Project APE....

Twelve of the 27 sites (44PY0261, 44PY0270–44PY0275, 44PY0281, 44PY0284, 44PY0358, 44PY0375, and 44PY0442) mapped within the APE were relocated during the Project surveys. Relocated sites 44PY0261, 44PY0270, 44PY0271, 44PY0281, 44PY0358, 44PY0375, and 44PY0442) are discussed in this report. Per DHR guidelines, the five relocated cemeteries (44PY0272–44PY0275 and 44PY0284) are considered architectural resources and are discussed in the Project architectural history report (Karpyneć et al. 2018). Summary information on the 15 sites that were not relocated (44PY0259, 44PY0260, 44PY0263–44PY0265, 44PY0267, 44PY0277, 44PY0279, 44PY0280, 44PY0329, 44PY0334, 44PY0359, 44PY0360, 44PY0373, and 44PY0374) is provided elsewhere in this report.”

Information concerning the fifteen (15) sites that were mapped within the direct affects APE but not relocated during the investigation can be found on the following pages of the Final Report.

- 44PY0259 – page 65
- 44PY0260 – page 64
- 44PY0263 – page 45
- 44PY0264 – page 64
- 44PY0265 – page 178
- 44PY0267 – page 90
- 44PY0277 – page 161
- 44PY0279 – page 98
- 44PY0280 – page 90

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

**Responses to Environmental Information Request
Dated February 13, 2019**

44PY0329 – page 133
44PY0334 – page 195
44PY0359 – page 134
44PY0360 – page 196
44PY0373 – page 198
44PY0374 – page 197

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

81. In appendix 4-D, clarify the number of shovel probes that were positive for locations 44PY270 and Segment 20, as mapping shows a higher number of positive probes than what is discussed in RR4.

Response:

The Final version of the Appendix 4-D report (included as part of Attachment 61-1 of Question#61 within this response package) clarifies that there were nine positive Phase I shovel tests at site 44PY270, and includes a revised site map. The additional shovel tests previously shown were excavated during initial Phase II work at that site, and will be reported separately once the work is completed.

Segment 20 is correctly described as having no positive shovel tests on page 77 of the Appendix 4-D in Resource Report 4 that was filed with the FERC on November 6, 2018.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

82. In appendix 4-G, provide forms as an appendix.

Response:

Historic architectural sites recorded in North Carolina are provided in as part of Attachment 71-1 of Question#71 within this response package. The site forms will be included in the Final Architectural History report for North Carolina within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

83. Confirm that copies of all cultural resources investigation reports were conveyed to the Monacan Indian Nation, Nansemond Indian Tribe, Upper Mattaponi Indian Tribe, Sappony Tribe, and Occaneechi Band of the Saponi Nation. File all tribal comments on the reports with the FERC.

Response:

Copies of the Draft Phase I archaeological survey and architectural survey reports for Virginia and North Carolina were made available to the Monacan Indian Nation, Nansemond Indian Tribe, Upper Mattaponi Indian Tribe, Sappony Tribe, and Occaneechi Band of the Saponi Nation via a secure FTP (File Transfer Protocol) site on February 21, 2019. Additional draft and final cultural resources reports will be provided as they become available.

Updated correspondences received from Native American entities are included as Attachment 83-1.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

84. In response to the letter from Cultural Heritage Partners to the FERC dated November 16, 2018 (accession number 20181116-5078), confirm that Mountain Valley’s cultural resources consultant (TRC) has reviewed the literature listed in the letter to become familiar with Monacan Indian Nation history and archaeology. In addition, the Monacan Nation recommends that Mountain Valley use the Monacan Museum as a source of information regarding the history and culture of the tribe.

Response:

The Project’s cultural resource consultant has reviewed the following sources, as requested by Cultural Heritage Partners:

Monacan Millennium: a Collaborative Archaeology and History of a Virginia Indian People (Hantman, 2018)

The Language Ghost: Linguistic Heritage and Collective Identity Among the Monacan Indians of Central Virginia (Wood, 2016)

Monacans and Miners: Native American and Coal Mining Communities in Appalachia (Cook, 2000).

The Project’s consultant has not yet obtained a copy of *The Monacan Indians: Our Story* (Shields and Wood, 1999), but will review that source as soon as it is available.

The Project staff will continue coordination with the Monacan Indian Nation and other tribes, including a planned visit to the Monacan Museum in Amherst, Virginia.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 4 – Cultural Resources

85. File a response and additional information as requested by the North Carolina SHPO in their letter dated December 20, 2018.

Response:

The Project submitted a revised Final North Carolina Archaeological Survey Report to the North Carolina SHPO, along with a cover letter addressing the North Carolina SHPO's questions concerning the draft report as part of Attachment 61-1 of Question #61 within this response package.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 5 – Socioeconomics

86. Clarify and/or provide the following information described below regarding workforce numbers.
- a. Table 1.4-1 provides workforce numbers for two spreads. Confirm that the workforce for the compressor station and other aboveground facilities are included within the two spreads listed in the table.
 - b. Table 1.4-1 lists a peak workforce of 650 workers (325 per spread). However, section 1.4.5 states that the peak workforce would be up to 900 people. Clarify.
 - c. Section 5.4.1 states that table 1.4-1 provides the average and peak workforce numbers for the Project; however, only peak workforce numbers are presented. Update the table to include average workforce numbers.

Response:

- a. The spread workforce numbers shown in Table 1.4.1 do not include the workforce for the Lambert Compressor Station and four interconnects. The Project anticipates that the workforce for the Lambert Compressor Station will consist of approximately 110 personnel and for each of the four interconnects will consist of approximately 25 personnel each.
- b. Based on the information proved in Response 86.a., the total peak workforce for the Project is expected to be approximately 860 personnel.
- c. The average workforce for the Project is 500 personnel. Table 1.4-1 has been updated below to include average workforce by spread.

REVISED Table 1.4-1							
Construction Spreads for the MVP Southgate Project							
Spread	Facility	Begin MP	Ending MP	Spread Length (Miles)	Construction Year	Peak Workforce	Average Workforce
1	H-605 Pipeline	0	0.4	0.4	2020	485	300
1	H-650 Pipeline	0	30.4	30.4	2020		
2	H-650 Pipeline	30.4	73.1	42.6	2020	375	200

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Name of Respondent: Mr. Klete Kutrovac
Title: Director of Construction
Phone Number: 724-271-7457

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 5 – Socioeconomics

87. Provide correspondence with local emergency services, including any recommendations from local police and fire departments regarding additional training or staffing that may be needed during construction or operation of the Project.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 5 – Socioeconomics

88. As previously requested in our pre-filing comments on draft RR5, dated October 5, 2018, update the Traffic Mitigation Plan with the following information:

- a. increased traffic from Project-related activities (including commuting workers, construction equipment, and truck deliveries), including the number of workers' cars, equipment, and trucks that would use local roads, and commuting periods; and
- b. locations of commuting workers collection points and bus routes and associated traffic impacts.

Response:

- a. The Project will determine the number of workers' cars, equipment, and trucks that would use local roads and commuting periods and will be provided in the Implementation Plan. The Project will establish routes to and from the Project work areas to ensure that traffic impacts are minimized. These established routes will be provided to the Contractors' and utilized during construction. Section 1.1 of the Project's revised *Traffic and Transportation Management Plan* has been updated to include this information (see Attachment 88-1).
- b. Prior to construction, the Project will determine locations of commuting workers collection points (it is anticipated the majority of the worker collection points will be the permitted contractor yards), and bus routes and associated traffic impacts. Section 3.0 of the Project's revised *Traffic and Transportation Management Plan* has been updated to include this information (see Attachment 88-1).

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 5 – Socioeconomics

89. In the *Traffic and Transportation Management Plan* Mountain Valley stated “emergencies or other designated construction activities may necessitate nighttime work”. Clarify and give examples of what “other designated activities” would mean during the construction of the proposed Project and require nighttime work.

Response:

Examples of “other designated activities” include activities that require continuous working timeframes that would need to extend beyond daylight hours such as hydrostatic testing of the pipeline or other tie-in work, commissioning activities, construction activities at the Lambert Compressor Station, system outage work, or a horizontal direction drill.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 5 – Socioeconomics

90. Clarify if Mountain Valley has accounted for socioeconomic and environmental justice impacts from all laydown/contractor yard/additional workspace areas, including those identified in RR1, table 1.3-4.

Response:

The Project considered environmental justice impacts for all laydown/contractor yard/additional workspace areas. The Project will provide updated information within the Supplemental Information Package to be submitted in March 2019 that will account for socioeconomic and environmental justice impacts from all laydown/contractor yard/additional workspace areas, including those identified in Resource Report 1, Table 1.3-4.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 5 – Socioeconomics

91. Provide an updated environmental justice analysis, including an impacts discussion, using the following criteria (recommended by the NCDEQ and U.S. Environmental Protection Agency's Environmental Justice Interagency Working Group Promising Practices for Environmental Justice Methodologies in NEPA Reviews) to identify environmental justice communities:

- a. census block groups that have a minority population of more than 50 percent;
- b. census block groups that have a household poverty rate of more than 20 percent; and
- c. census block groups that have a household poverty rate or minority population that is 10 percent higher than their respective county.

Response:

The Project will provide an updated environmental justice analysis within the Supplemental Information Package to be submitted in March 2019 to identify environmental justice communities.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

92. Provide the analysis of Light Imaging Detection and Ranging (LiDAR) imagery and field verification of steep slopes discussed in section 6.5.4. Based on Mountain Valley's analysis of this site-specific data, provide a table that describes (by milepost) areas within or adjacent to the Project area with increased risk of slope instability. For each identified area, include a description and distance to nearby and downslope sensitive environmental resources (e.g., wetlands, waterbodies, residences).

Response:

The Project will provide the analysis of Light Imaging Detection and Ranging (LiDAR) imagery and field verification of steep slopes as discussed in section 6.5.4 within a Supplemental Information Package to be submitted in March 2019. Based on this analysis, the Project will provide a table within the Landslide Mitigation Report, also to be filed within the Supplemental Information Package that describes, by milepost, areas within or adjacent to the Project area with increased risk of slope instability.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

93. Address the following regarding landslide hazards, and steep and unstable slopes in a Landslide Mitigation Plan:

- a. provide additional assessment (such as field-based geotechnical investigations evaluating potential landslide areas) for sections of the pipeline route in areas with steep slopes;
- b. general guidelines defining where trench plugs, chips, and/or French plugs would and would not be used, or would be modified, to avoid water oversaturation of soils during significant or extended rainfall events which may result in increased pore pressure and potentially destabilize slopes (“bathtub effect”);
- c. 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
- d. pre-construction, construction, and long-term (operational) monitoring and mitigation measures that would be used in areas characterized as landslide hazards, steep, and/or unstable slopes. (i.e., surface displacement surveys, manual or automated strain gauge monitoring, and groundwater level monitoring).

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

94. Provide a list of karst features present within 0.25-mile of the Project based on desktop data and field data where field surveys have been conducted.

Response:

No karst features were identified within 0.25-mile of the Project based on desktop review. Field verification is pending property access for a small number of parcels that have a low probability of containing potential karst features. The Project expects to have access in July 2019 and file additional information in August 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

95. Appendix 6-E states field verification would be conducted along the Project alignment to verify whether karst features are present. File results of these surveys or indicate when these surveys would be completed and filed with the Commission.

Response:

No karst features were identified within 0.25-mile of the Project based on desktop review. Field verification is pending property access for a small number of parcels that have a low probability of containing potential karst features. The Project expects to have access in July 2019 and additional information in August 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

96. As previously requested in FERC's September 24, 2018 pre-filing comments, if potential karst areas are identified within the Project workspaces, provide the following information concerning construction practices and mitigation measures:

- a. confirm that Mountain Valley would first attempt to avoid karst features with minor route variations, if possible;
- b. a table listing all groundwater supply wells and springs within 500 feet of Project workspaces in karst areas, and confirmation that Mountain Valley would offer pre- and post-construction monitoring of water quality and yield of wells and springs used for domestic water supplies;
- c. if contractors and EIs would be trained to identify karst features;
- d. the set-back distance from karst features for equipment storage, fueling, and maintenance;
- e. a discussion of the structural integrity of the proposed pipeline design and its performance in karst areas, including an assessment of the possible unsupported span-width; and
- f. measures that would be implemented to repair or mitigate the development of a sinkhole in proximity to the Project facilities, and the monitoring of these features during the Project operation.

Response:

No karst features were identified within 0.25-mile of the Project based on desktop review. If karst features are observed as a result of field verification (currently pending property access) response to comments 96a through 96f will be provided to the FERC by August 2019. Nonetheless, the Karst Specialist Team considers there to be low probability that karst features will be observed during field verification.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

97. Revise section 6.5.1 to include the locations of any mapped sinkholes and cave systems in the area identified as “karst formations” in figure 6-C and their distances from proposed Project facilities.

Response:

No karst features were identified within 0.25-mile of the Project based on desktop review. Refer to Figure 1 – Generalized Eastern US Karst, Figure 2 – Karstic Potential Detail 1, Figure 3 – Karstic Potential Detail 2, and Figure 4 – Karstic Potential Detail 3 combined as Attachment 97-1. Field verification of potential karst features is pending property access. Nonetheless, the Karst Specialist Team considers there to be low potential that karst features will be observed on field verification.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

98. Provide figures 1 – 4 as listed in appendix 6E.

Response:

Figures 1-4 as listed in Appendix 6E are provided as Attachment 97-1 of Question #97 within this response package.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

99. Provide revised tables 6.2-2, 6B-1, and 6B-2 to include a subsection for the county crossed by the Project.

Response:

The Project has revised Tables 6.2-2, 6B-1 and 6B-2. Tables are included as Attachment 99-1.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

100. Confirm if any mineral resources are located within 0.25-mile of any aboveground facilities.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

101. Provide the distance to Project workspaces of the East Alamance Quarry located near MP 66.8; and provide justification for the determination that the Project would have no effect on quarry operations.

Response:

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.

The Project continues to collaborate with the East Alamance Quarry to minimize or eliminate any impact to quarry operations. As stated in Resource Report 6, Section 6.4, the Project facilities will not cross quarry operations and will be designed, constructed, operated, and maintained by experienced firms in accordance with or to exceed minimum federal safety standards in 49 Code of Federal Regulations 192. These regulations, which are intended to protect the public and to prevent natural gas facility accidents and failures, apply to all areas along the pipeline route. The Project will be designed, constructed, operated, and maintained in compliance with established industry standards; therefore, no effects on the quarry operation are anticipated from construction or operation of the Project.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

102. Provide a revised appendix D-6, table 1 (Areas of Potential Blasting) with potential blasting indicated for the entire pipeline, or clarify why milepost information provided is non-contiguous. Additionally, include the total distance for which blasting may be needed.

Response:

Appendix D-6, Table 1, “Areas of Potential Blasting by Milepost for Right-Of-Way Grade and Pipeline Trench Excavation”, was developed from the published information by the United States Geological Survey (USGS) geologic and United States Department of Agriculture, Natural Resources Conservation Service USDA/NRCS) for the geographic areas of Pittsylvania County, Virginia, and Rockingham and Alamance Counties, North Carolina.

Using this information, the potential for blasting was developed by milepost along the proposed pipeline route where the depths to bedrock/non-rippable materials were projected to be less than the proposed pipeline trench depth. Bedrock tends to be shallower at higher relative elevations and deeper along the lower portions of slopes, therefore no blasting is anticipated to achieve the pipeline right-of-way grade at the lower portions of slopes. Therefore, blasting or the potential for blasting is not contiguous along the total proposed pipeline route.

The Project anticipates that blasting may be necessary within the areas defined by the “Areas of Potential Blasting by Milepost for Right-Of-Way Grade and Pipeline Trench Excavation” table of Appendix D-6, Table 1. Of the proposed 73 mile pipeline route, blasting may be required across approximately 54 miles. This consists of six different non-contiguous sections along the proposed pipeline route ranging from 1 mile in length to 20 miles in length.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

103. The General Blasting Plan at section 4 states “if blasting is conducted within 150 feet of an active water well, as necessary, MVP will conduct a pre-construction evaluation of the well. Upon request by a landowner who had a pre-construction test, a post-construction test will be performed.” Testing of water supply wells and springs (whether in current use or not) within 150 feet of planned blasting should be offered regardless of whether the landowner has requested it. Therefore, confirm that Mountain Valley would offer both pre- and post-blasting water quality and yield testing to landowners for all water supply wells and springs within 150 feet of blasting. Revise and file the General Blasting Plan accordingly.

Response:

The Project confirms that it will offer both pre-and post-blasting water quality and yield testing to landowners for all water supply wells and springs within 150 feet of blasting. The General Blasting Plan has been revised accordingly and is included as Attachment 103-1 –General Blasting Plan.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

104. Discuss the potential for blasting to cause or subsequently facilitate landslides or slope instability and describe the measures that Mountain Valley would use to avoid, minimize, or mitigate this risk. This discussion should identify slopes that would require blasting, and quantify the potential for blasting-induced slope instability or movement.

Response:

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), power 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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

105. Based on the insufficient information provided in response to our pre-filing comments on draft RR6, dated September 24, 2018, 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. This description should address known concentrations of uranium and radium in soil and groundwater in the Project vicinity.

Response:

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.

Reference:

BDC, et al., 2009. Technical Report on the Coles Hill Uranium Property, Pittsylvania County, Virginia, United States of America, South Coles Hill Deposit – Latitude 36°52’18”N, Longitude 79°18’00”W, North Coles Deposit – Latitude 36°52’43”N, Longitude 79°18’12”W, Behre Dolbear & Company, LTD., Marshall Miller and Associates, Inc., and PAC Geological Consulting, Inc., February 2, revised April 29.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

106. Based on comments received from the NCDEQ, state whether Mountain Valley would consult with North Carolina State agencies to determine the involvement of agency representatives during construction, with regard to unanticipated discoveries of paleontological resources.

Response:

The Project contacted the North Carolina State agencies in July and October 2018 to determine the involvement of agency representatives during construction, with regard to unanticipated discoveries of paleontological resources; however, no response has yet been received. The Project will continue its attempt at consultation with the North Carolina state agencies regarding this matter and update the FERC if additional correspondence is received.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

107. For each planned HDD crossing, provide a revised alignment profile that incorporates site-specific geotechnical investigations (subsurface lithology along the drill path and the top of the water table [zone of saturation], Standard Penetration Test [SPT] results, soil mechanic properties/Atterberg Limits, rock coring results including core recovery, and Rock Quality Designation [RQD] for each bedrock core run).

Response:

The Project is currently preparing updated drawings to address the comments in the request above. The revised HDD drawings will be submitted in a future Supplemental Information Package.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

108. Based on the insufficient information provided in response to our pre-filing comments on draft RR6, dated September 24, 2018, for each planned HDD crossing provide an assessment which includes a description of:

- a. the likelihood of success for each drill;
- b. any subsurface conditions that were identified as a result of geotechnical investigations that may increase the risk of HDD complications (e.g., unplanned IRs, drill hole collapse, contamination); and
- c. the measures that would be implemented to minimize these risks.

Response:

For the proposed HDD crossings at Dan River and Stony Creek, the probability of successful completion of the drill is high based on the geotechnical analysis completed to date. The geotechnical analysis did not identify any mines or other large voids nor the presence of any concerning geological compositions.

At each location, there are subsurface conditions that will require extra care to minimize the possibility of inadvertent returns. Per the Delft equation for the each of the drills (referenced in Question#109 of this response package), there is a small probability of IR at the end of each drill that will be minimized by incorporating that area into a mud receiving pit. In general, the largest concern for IR occurs at the highly weathered and fractured rock layer between the soil and the competent bedrock. To mitigate this concern, the drill path is designed to maximize distance between the drill path and a waterbody when it crosses this layer. Additionally, per the Project's Design and Construction Standards and the HDD Contingency Plan, the contractor will monitor downhole pressure. The constant monitoring will allow for the contractor to identify fluid loss and remedy the situation quickly.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

109. Mountain Valley's Geotechnical Investigation Report provides recommended soil parameters for hydraulic fracture modeling based on site-specific conditions; however, the analysis was not completed. Therefore, and as previously requested in our pre-filing comments on draft RR6, dated September 24, 2018, for each HDD crossing, describe the potential for hydrofracture and IR using the U.S. Army Corps of Engineers' Delft method (or an equivalent method) for crossings through unconsolidated material, and/or a qualitative analysis for an IR through bedrock utilizing RQD values obtained from bedrock cores.

Response:

The Project calculated preliminary Delft equations based on the geotechnical core samples that were completed to date for both Dan River and Stony Creek. The Delft equations will be updated when all geotechnical work is completed for each site, expected to be June 2019.

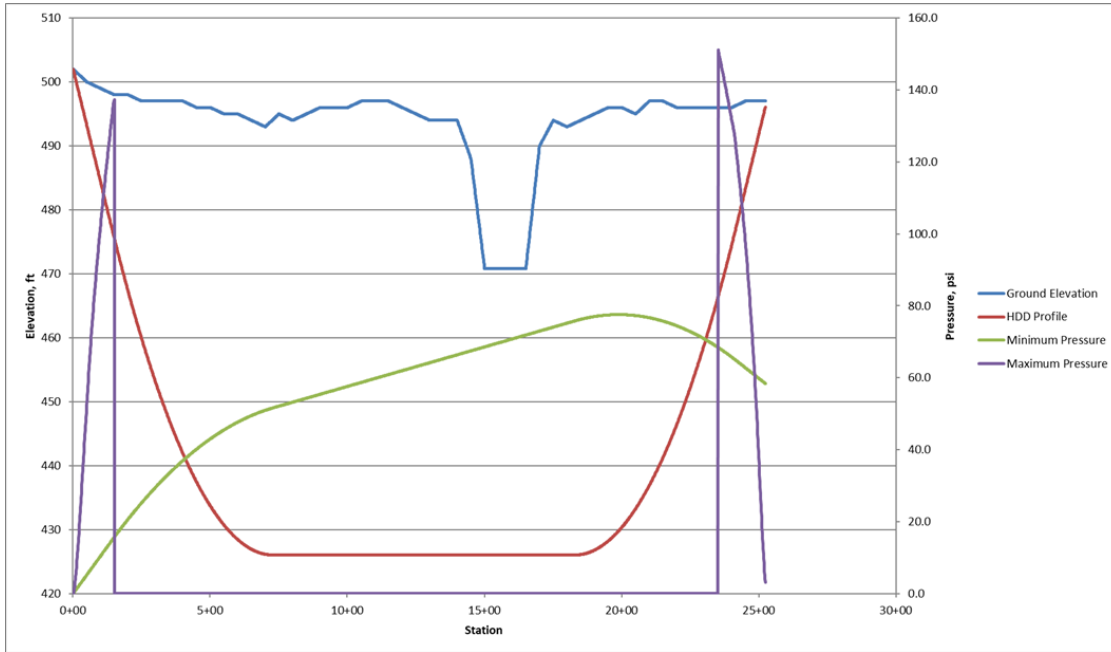
The Delft equation determines the maximum mud pressure to avoid inadvertent returns in soils. This does not apply to rock of any kind; therefore, the results show a Delft value of zero when the drill is in rock. The inputs used to determine the Delft Equation values are located in the Geotechnical Investigations Report, located in Appendix 6-C per site location. To best describe the maximum mud pressure and its impact on each of the HDDs, the figures below depict the ground elevation (blue), preliminary HDD profile (red), minimum mud pressure (green), and the maximum mud pressure (purple). These curves are a function of drill bit and rod size, mud specifications, pump flow rates, and other variables determined by contractor's preference.

For both crossings, the Delft Equation depicts the minimum mud pressure line (green) much lower than the maximum mud pressure line (purple), therefore the risk of inadvertent return is low for the entry side of the drill. For a large portion of the exit side, the maximum mud pressure line is well above the minimum mud pressure line. The lines intersect near the proposed exit of the Dan River HDD. This area of known risk will be included in the mud return pit on the exit side of the drill and is therefore will be mitigated. For the sections where the drills enter rock, RQD values and recovery percentages will provide insight into the drill's success. At the Dan River and Stony Creek, HDDs will be designed such that the majority of the drill path will be located in a competent rock layer with high RQD values. Chance encounters with unpredictable single fractures are the only concern at this point and they present a minimal risk. Per the MVP Design and Construction Standards and the HDD Contingency Plan, the contractor must monitor downhole pressure at all times during the pilot and if requested, during the reaming process as well. The constant monitoring will allow for the contractor to identify fluid loss and remedy the situation quickly.

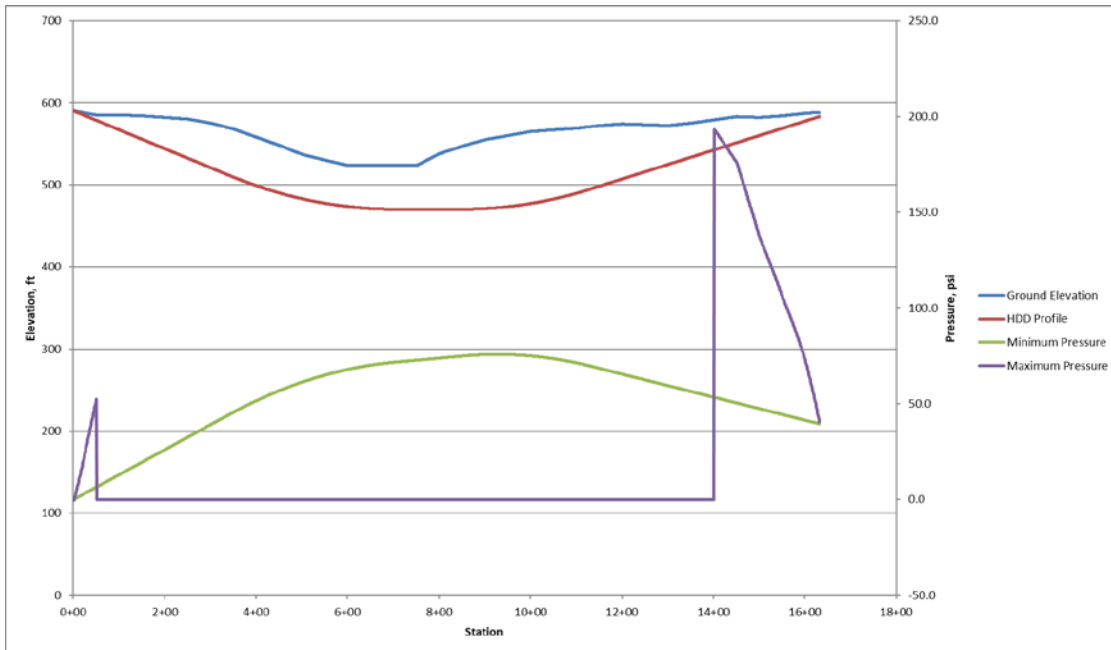
**Mountain Valley Pipeline, LLC
MVP Southgate Project
Docket No. CP19-14-000**

**Responses to Environmental Information Request
Dated February 13, 2019**

Dan River Delft Equation



Stony Creek Delft Equation



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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

110. Clarify when Core Sample No. 2 would be drilled for the Dan River HDD crossing. If Mountain Valley does not intend to complete Core Sample No. 2, provide justification for how design and feasibility would be determined.

Response:

The Project plans to complete Dan River Core Sample No. 2 by June 2019, after which the project will file updated Geotechnical reports.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 6 – Geology

111. Clarify when Core Sample No. 2 would be drilled for the Stony Creek HDD crossing. If Mountain Valley does not intend to complete Core Sample No. 2, provide justification for how design and feasibility would be determined.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 7 – Soils

112. Update the “Percent of Project Area” values in table 7.2-1, specifically Prime Farmland or Farmland of Statewide Importance and Low Revegetation Potential to match the acreages in the table.

Response:

The Project will update the “Percent of Project Area” values in Table 7.2-1, specifically Prime Farmland or Farmland of Statewide Importance and Low Revegetation Potential to match the acreages in the table within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 7 – Soils

113. Provide total acreage of Prime Farmland and Farmland of Statewide Importance that would be permanently affected by aboveground facilities and permanent access roads associated with the Project.

Response:

The Project will provide total acreage of Prime Farmland and Farmland of Statewide Importance that would be permanently affected by aboveground facilities and permanent access roads associated with the Project within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

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

114. Reconcile the discrepancy between the total number of acres affected during construction and operation between tables 1.3-1, 3.4-1, and 8.2-2.

Response:

The Project will reconcile the discrepancy between the total number of acres affected during construction and operation between Tables 1.3-1, 3.4-1, and 8.2-2 within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

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

115. Section 8.2.3.9 states that one potential contractor yard (CY-04) is located on a parcel with a church. Describe the measures that Mountain Valley would take to avoid impacts on users of the church (e.g. avoid using the contractor yard during days of worship).

Response:

The Project will coordinate with First Baptist Church of Draper representatives to minimize any potential disturbance to church activities and services including the possibility of not utilizing CY-04 on Sundays during worship services, if requested by the First Baptist Church of Draper. The Project will provide notification of the commencement and duration of construction-related activities and use of CY-04.

Name of Respondent: Mr. Klete Kutrovac
Title: Director of Construction
Phone Number: 724-271-7457

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

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

116. For section 8.3.2, provide specific details as to how the landowners would be notified of construction.

Response:

Landowners will be notified of planned construction activities a minimum of seven days prior to the scheduled construction via notification letter. Phone calls will also be placed at the noted phone number a minimum of 24 hours prior to entry onto the property. For landowners that have negotiated other means or terms of notification, the Project will adhere to those terms.

Name of Respondent: Mr. Travis Garrett
Title: Regional Land Supervisor
Phone Number: 304-627-9582

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

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

117. 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. Indicate on the plans whether the structures would be removed, relocated, or protected.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

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

118. Table 8-D lists numerous structures that are within the construction workspace of the Project. Update the table to indicate whether those structures would be removed, relocated, or protected.

Response:

The Project will update the Table 8-D to indicate whether those structures would be removed, relocated, or protected within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

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

119. Describe any use restrictions and impacts on recreational users of the Dan River, Banister River, Sandy River, the planned regional trail at MP 68.6, and the Mountains-to-Sea Trail in the areas that would be crossed. If any use restrictions are anticipated, describe how users would be notified.

Response:

As stated in Resource Report 8, Section 1.1.2.1, the Project proposes to cross the Dan River using horizontal directional drill; therefore, no use restrictions for recreational watercraft are anticipated during construction or operation of the Project. Recreational users may experience temporary visual and noise impacts for a short-duration during construction. Temporary visual impacts are not anticipated to be significant due to the presence of a wooded buffer along the both banks of the river; that will provide visual screening of equipment in the staging areas located on either side of the river crossing.

At the Banister River and Sandy River crossings, passage of recreational watercraft will be temporarily restricted at these open-cut crossing locations during construction. The Project will consult with the Virginia Department of Conservation and Recreation to identify the best locations to notify users (i.e., recreational websites and/or upstream access areas). Additionally, the Project will coordinate a portage path around the construction sites with the Virginia Department of Conservation and Recreation and will post signage to alert recreational users of the temporary detour. Potential signage locations for the Banister River crossing include White Oak Wildlife Management Area and boat access points (i.e., Wolf Trap Access, Terry's Bridge, Kings Bridge Landing, and Banister Lake) in Halifax, Virginia.

While the Project will incorporate the above-described measures to alert recreational users, recreational watercraft use, if any, is anticipated to be minimal at the crossing locations. The Banister River at the crossing location is not currently mapped as an existing Blueway, and the nearest public access points on the river (see above-noted boat access points) are located more than 35 river miles from the crossing location, in Halifax, Virginia. Similarly, the Sandy River is not currently mapped as a Blueway, and there is no public boat access point mapped on the river (Virginia Outdoors Plan Mapper, accessed on February 19, 2019, <http://consapps.dcr.virginia.gov/dnh/vop/vopmapper.htm>).

If the trail at MP 68.6 is constructed prior to the Project; temporary indirect impacts on trail users may include construction-related noise and dust and will be short in duration. If a temporary trail detour is required, the Project will post signage at both the trail enter and exit to the construction site to direct users around the construction site. Additionally, the Project will coordinate the trail detour with the trail manager(s) as applicable.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

No use restrictions or impacts on recreational users at the Mountains-to-Sea Trail crossing are anticipated from construction or operation of the Project. As discussed in Resource Report 8, Section 8.4.2.1, the pipeline alignment crosses the Mountains-to-Sea Trail in a location where the trail is coincident with an existing public roadway that the Southgate Project will cross via conventional bore (MP 69.8). Based on the use of conventional bore at the crossing, and the presence of the existing public roadway, no effects on recreational use of the Mountains-to-Sea Trail are anticipated from construction or operation of the Project.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

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

120. Describe how Mountain Valley would maintain access across the right-of-way for farmers and equipment during construction.

Response:

The Project will work with the landowner to maintain access to cultivated agricultural portions of their property during the construction of the pipeline. If requested by the landowner, the Project will provide access across the construction right-of-way for farmers via temporary access roads. Where the roads cross the pipeline right-of-way, landowners will be asked to submit information regarding the type of equipment to be used (type includes information such as, whether it is wheeled or tracked, weight) and the expected duration of the crossing. The Project will then perform an analysis based on this information to determine if and how the pipeline right-of-way can be safely crossed. Measures that may be implemented to accomplish this include timber mats, steel plates, or other padded crossing alternatives.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

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

121. Provide a table for all tracts that are part of a forest land management program (i.e. North Carolina's Forest Development Program) or any other conservation easement. Provide mitigation measures that would ensure that landowners are not removed/ineligible for these programs (i.e., due to tree clearing activities associated with the Project).

Response:

The Project will provide an updated Table 8.4-1 which provides a list of federal, state, recreation and conservation lands crossed by or located within 0.25 mile of the Southgate Project within the Supplemental Information Package to be submitted in March 2019. In addition, updated text for Section 8.4.1.1 will be provided to describe updated correspondence with easement holders and applicable minimization measures (if any) to be implemented.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

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

122. Describe measures that Mountain Valley would use to avoid or minimize potential impacts on conservation easements described in section 8.4.1 that are located within 500 feet of construction workspace, contractor yards, or access roads.

Response:

Conservation easements located within 500 feet of construction disturbance would not be crossed by the Project and therefore, not directly impacted by the Project. For conservation easements directly impacted by the Project, Mountain Valley will continue to coordinate with the easement holder to ensure use of this area during construction and operation of the Project is consistent with the conditions of the conservation easement.

The Project will provide an updated Table 8.4-1 which provides a list of federal, state, recreation and conservation lands crossed by or located within 0.25 mile of the Southgate Project within the Supplemental Information Package to be submitted in March 2019. In addition, updated text for Section 8.4.1.1 will be provided to describe updated correspondence with easement holders and applicable minimization measures (if any) to be implemented.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 9 – Air Quality and Noise

Air Quality

123. Update tables 9.2-8 and 9.2-9, and appendix 9-A to assess fugitive dust emissions from travel on paved and unpaved roads from on-road construction equipment and mobile commuter traffic (reference: AP-42 sections 13.3.1 and 13.2.2).

Response:

The fugitive dust emissions from travel on paved and unpaved roads from construction equipment and mobile commuter traffic is summarized in revised Tables 9.2-6 and 9.2-7 below. The detailed emission calculations and revised construction emissions are provided in the revised Appendix 9-A in Attachment 123-1.

REVISED Table 9.2-6								
Estimated Construction Emissions from the MVP Southgate Project – 2020								
SOURCE	2020 CONSTRUCTION EMISSIONS (TPY)							
	CO₂	CO	NO_x	PM₁₀	PM₂₅	SO₂	VOC	HAPS
Lambert Compressor Station/Interconnect:								
Construction Equipment Engines	7,664	15.26	22.16	1.64	1.64	0.041	3.13	0.18
On-Road Vehicle Travel	470	3.77	0.46	3.72	0.92	0.003	0.13	0.05
Off-Road Vehicle Travel	1,766	5.78	3.87	17.63	2.04	0.014	0.50	0.11
Earthmoving Fugitives	N/A	N/A	N/A	12.28	1.23	N/A	N/A	N/A
Wind Erosion	N/A	N/A	N/A	1.77	0.27	N/A	N/A	N/A
Open Burning	65	2.88	0.08	0.35	0.35	N/A	0.49	N/A
Lambert Total	9,966	27.68	26.57	37.39	6.44	0.058	4.25	0.34
Meter Stations:								
Construction Equipment Engines	4,411	7.61	13.04	0.91	0.91	0.023	1.71	0.10
On-Road Vehicle Travel	150	1.26	0.13	2.51	0.62	0.001	0.04	0.02
Off-Road Vehicle Travel	1,855	4.52	4.46	15.44	1.84	0.015	0.53	0.11
Earthmoving Fugitives	N/A	N/A	N/A	3.36	0.34	N/A	N/A	N/A
Wind Erosion	N/A	N/A	N/A	0.48	0.07	N/A	N/A	N/A
Open Burning	4	0.17	0.005	0.02	0.02	N/A	0.03	N/A
Meter Station Total	6,420	13.56	17.64	22.73	3.79	0.040	2.31	0.22
Pipeline:								
Construction Equipment Engines	83,586	71.95	196.6	11.22	11.22	0.437	24.76	1.92
On-Road Vehicle Travel	2,822	25.24	2.10	11.19	2.73	0.019	0.75	0.32

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

**Responses to Environmental Information Request
Dated February 13, 2019**

REVISED Table 9.2-6								
Estimated Construction Emissions from the MVP Southgate Project – 2020								
SOURCE	2020 CONSTRUCTION EMISSIONS (TPY)							
	CO₂	CO	NO_x	PM₁₀	PM₂₅	SO₂	VOC	HAPS
Off-Road Vehicle Travel	1,464	6.50	2.77	18.01	2.04	0.011	0.41	0.11
Earthmoving Fugitives	N/A	N/A	N/A	935.18	93.52	N/A	N/A	N/A
Wind Erosion	N/A	N/A	N/A	134.61	20.19	N/A	N/A	N/A
Open Burning	8,805	387.6	11.07	47.07	47.07	N/A	66.45	N/A
Pipeline Total	96,677	491.3	212.5	1,157.	176.76	0.468	92.37	2.35
Pipeline in Pittsylvania, VA	32,549	176.7	71.28	21.29	21.08	0.156	33.01	0.78
Pipeline in Rockingham, NC	32,502	177.5	71.15	21.39	21.20	0.155	33.16	0.78
Pipeline in Alamance, NC	31,626	136.9	70.11	16.46	16.26	0.156	26.19	0.78
2020 TOTAL:	113,062	532.5	256.8	1,217.	187.0	0.6	98.9	2.9
N/A indicates that the specific pollutant emissions are not expected from that source.								

REVISED Table 9.2-7								
Estimated Construction Emissions from the MVP Southgate Project – 2021								
SOURCE	2021 CONSTRUCTION EMISSIONS (TPY)							
	CO₂	CO	NO_x	PM₁₀	PM₂₅	SO₂	VOC	HAPS
Lambert Compressor Station/Interconnect:								
Construction Equipment Engines	1,929	2.14	4.46	0.34	0.34	0.0101	0.69	0.04
On-Road Vehicle Travel	95	0.65	0.12	0.58	0.14	0.0007	0.03	0.01
Off-Road Vehicle Travel	233	0.84	0.49	2.48	0.29	0.0019	0.07	0.02
Earthmoving Fugitives	N/A	N/A	N/A	6.14	0.61	N/A	N/A	N/A
Wind Erosion	N/A	N/A	N/A	0.88	0.13	N/A	N/A	N/A
Open Burning	0	0	0	0	0	N/A	0	N/A
Lambert Total	2,257	3.62	5.07	10.41	1.51	0.0126	0.78	0.07
Meter Stations:								
Construction Equipment Engines	0	0.00	0.00	0.00	0.00	0.0000	0.00	0.00
On-Road Vehicle Travel	0	0.00	0.00	0.00	0.00	0.0000	0.00	0.00
Off-Road Vehicle Travel	0	0.00	0.00	0.00	0.00	0.0000	0.00	0.00
Earthmoving Fugitives	N/A	N/A	N/A	0.00	0.00	N/A	N/A	N/A
Wind Erosion	N/A	N/A	N/A	0.00	0.00	N/A	N/A	N/A
Open Burning	0	0	0	0	0	N/A	0	N/A
Meter Station Total	0	0.00	0.00	0.00	0.00	0.0000	0.00	0.00
Pipeline:								
Construction Equipment Engines	4,417	2.21	5.93	0.32	0.32	0.0221	1.14	0.10
On-Road Vehicle Travel	292	1.75	0.43	0.90	0.23	0.0022	0.08	0.03
Off-Road Vehicle Travel	131	0.60	0.24	1.64	0.19	0.0010	0.04	0.01
Earthmoving Fugitives	N/A	N/A	N/A	545.52	54.55	N/A	N/A	N/A
Wind Erosion	N/A	N/A	N/A	78.52	11.78	N/A	N/A	N/A
Open Burning	0	0	0	0	0	N/A	0	N/A
Pipeline Total	4,840	4.56	6.61	626.90	67.06	0.0253	1.26	0.14

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

**Responses to Environmental Information Request
Dated February 13, 2019**

REVISED Table 9.2-7								
Estimated Construction Emissions from the MVP Southgate Project – 2021								
SOURCE	2021 CONSTRUCTION EMISSIONS (TPY)							
	CO₂	CO	NO_x	PM₁₀	PM₂₅	SO₂	VOC	HAPS
Pipeline in Pittsylvania, VA	1,629	1.53	2.25	227.45	24.32	0.0086	0.42	0.05
Pipeline in Rockingham, NC	1,594	1.51	2.15	241.35	25.79	0.0083	0.41	0.04
Pipeline in Alamance, NC	1,617	1.52	2.21	158.11	16.95	0.0085	0.42	0.05
2021 TOTAL:	7,097	8.2	11.7	637.3	68.6	0.04	2.0	0.2
N/A indicates that the specific pollutant emissions are not expected from that source.								

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 9 – Air Quality and Noise

Air Quality

124. Confirm that emissions from HDD activities are included in the pipeline component of construction emissions in appendix 9-A. If not, update RR9, tables 9.2-8 and 9.2-9, and appendix 9-A to assess.

Response:

The emissions from HDD activities are included in the pipeline component of the construction emissions in Appendix 9-A and detailed in Tables 9-A3 through 9-A6 of Attachment 123-1 of Question #123 within this response package.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 9 – Air Quality and Noise

Air Quality

125. Reconcile greenhouse gas emissions from blowdown events at the Lambert Compressor Station from the following sources:

- a. appendix 9-B, table B-1 lists 1,109 tons per year (tpy) carbon dioxide equivalents (CO₂e);
- b. appendix 9-B, table B-8 adds up to 1,210 tpy CO₂e; and
- c. appendix 9-D, Modeling Report, table 2-1 shows 2,449 tpy CO₂e.

Response:

- a. The potential annual greenhouse gas emissions from expected blowdown events at the Lambert Compressor Station are provided in Table B-1 of Appendix 9-B as 1,109 tons per year of CO₂e. These greenhouse gas emission calculations are detailed in Table B-8 of Appendix 9-B and include all planned blowdown events.
- b. As provided in Table B-8, facility-wide blowdown events may occur for unplanned reasons (e.g. when an unsafe operating condition is detected). A full station blowdown will only occur during emergency conditions and these events are expected to be very infrequent and cannot be predicted. Thus, emergency full station shutdown event emissions are provided in Table B-8 as 101 tons per year of CO₂e for information purposes but are not included in the operational emissions summarized in Table B-1 of Appendix 9-B.
- c. The greenhouse gas emissions provided in Table 2-1 of Appendix 9-D were based on preliminary facility engineering information, which has been superseded by the facility engineering design information that is the basis for the greenhouse gas emissions provided in Tables B-1 and B-8 of Appendix 9-B. Note that Appendix 9-D was completed prior to the completion of the engineering design that is the basis for the blowdown events in the VADEQ air permit application for the Lambert Compressor Station.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 9 – Air Quality and Noise

Air Quality

126. Pursuant to appendix 9-B, table B-10, provide a summary table to show volatile organic compound and CO₂e emissions separately for blowdown events and fugitive leaks. Include an assessment of hazardous air pollutant emissions for each.

Response:

A summary table that provides the volatile organic compound (VOC), CO₂e, and hazardous air pollutant (HAP) emissions from blowdown events and fugitive leaks at the Lambert Compressor Station is provided in Table 126-1 below.

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

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 9 – Air Quality and Noise

Air Quality

127. Provide any pertinent correspondence to and from the VADEQ regarding the Virginia air permit application and its completeness that has occurred since December 14, 2018.

Response:

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 14th. Additional VADEQ correspondence since December 14, 2018 will be provided to the FERC within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 9 – Air Quality and Noise

Noise

128. Provide updated figures from appendix 9-E so that the distances from the noise source to the NSA are legible.

- a. Confirm that the distance to the nearest NSA to the LN 3600 Interconnect is 3,010 feet SE. If not, provide updated tables 9.3-8, 9.3-9, and 9.3-15 with correct information.
- b. Confirm that the distance to the nearest NSA to Railroad Crossing 4 is 700 feet N. If not, provide updated tables 9.3-11 and 9.3-12 with correct information.

Response:

Updated figures from Appendix 9-E are included as Attachment 128-1.

- a. The distance to the nearest NSA for the LN3600 Interconnect is 1,700 feet. Table 9.3-15 has been updated with the correct distance and location and with the correct modeled station contribution based on the updated location. This has also been updated in Figure 9.3-2.

Table 9.3-8 and Table 9.3-9 have also been updated to include the correct NSA number for the LN 3600 Interconnect.

REVISED Table 9.3-15								
Predicted Sound Levels – Compressor and Meter Station								
Compressor/ Meter Station	NSA	Distance from Compressor/ Meter Station to NSA (feet)	Direction	Measured Existing Ambient (L_{dn} dBA)	Estimated Contribution of Station Equipment (L_{eq} dBA / L_{dn} dBA)		Combined, All Sources Including Ambient (L_{dn} dBA)	Increase Above Existing Condition (dB)
Lambert Compressor Station	1	3,480	WSW	46.8	41.6	48.0	50.5	3.7
	2	3,500	SW		35.2	41.6	47.9	1.1
	3	3,290	SE	62.8	34.3	40.7	62.8	0.0
	4	3,800	N	44.8	33.0	39.4	45.9	1.1
LN 3600 Interconnect	1	1,700	NNW	49.7	21.3	27.7	49.7	0.0
T-15 Dan River Interconnect	1	750	S	65.0	40.4	46.8	65.1	0.1
T-21 Haw River Interconnect	1	550	N	65.0	35.4	41.8	65.0	0.0

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

**Responses to Environmental Information Request
Dated February 13, 2019**

REVISED Table 9.3-8										
Predicted Temporary Sound Levels Due to Construction, Single 12-Hour Daytime Shift										
Compressor / Meter Station	NSA	Existing Ambient Sound Levels, dBA <u>a/</u>			Predicted Sound Level –Single Daytime Shift, dBA		Construction Plus Ambient, dBA		Temporary Increase in Sound Level, dBA	
		Day	Night	L _{dn}	Day	L _{dn}	Day	L _{dn}	Day	L _{dn}
Lambert Compressor Station / Interconnect	1	36.8	40.8	46.8	48.7	46.6	49.0	49.7	12.2	2.9
	2				46.5	44.4	46.9	48.8	10.2	2.0
	3	60.4	55.1	62.8	43.8	41.7	60.5	62.8	0.1	0.0
	4	38.6	38.4	44.8	42.7	40.7	44.1	46.3	5.5	1.4
LN 3600 Interconnect	1	47.2	42.1	49.7	51.2	49.1	52.7	52.4	5.4	2.7
T-15 Dan River Interconnect	1	63.1	57.1	65.0	64.7	62.7	67.0	67.0	3.9	2.0
T-21 Haw River Interconnect	1	62.8	57.2	65.0	67.1	65.1	68.5	68.1	5.6	3.1

a/ To be conservative, ambient levels have been processed to remove insect noise.

REVISED Table 9.3-9										
Predicted Temporary Sound Levels Due to Construction, 24-Hour Construction Activities										
Compressor / Meter Station	NSA	Existing Ambient Sound Levels, dBA <u>a/</u>			Predicted Sound Level –Single Daytime Shift, dBA		Construction Plus Ambient, dBA		Temporary Increase in Sound Level, dBA	
		Day	Night	L _{dn}	Night	L _{dn}	Night	L _{dn}	Night	L _{dn}
Lambert Compressor Station / Interconnect	1	36.8	40.8	46.8	45.9	53.1	47.1	54.0	6.3	7.2
	2				43.7	50.9	45.5	52.3	4.7	5.5
	3	60.4	55.1	62.8	41.0	48.2	55.3	63.0	0.2	0.1
	4	38.6	38.4	44.8	40.0	47.1	42.3	49.1	3.9	4.3
LN 3600 Interconnect	1	47.2	42.1	49.7	48.5	55.4	49.4	56.4	7.3	6.7
T-15 Dan River Interconnect	1	63.1	57.1	65.0	62.0	69.2	63.2	70.6	6.2	5.6
T-21 Haw River Interconnect	1	62.8	57.2	65.0	64.4	71.5	65.2	72.4	8.0	7.4

a/: To be conservative, ambient levels have been processed to remove insect noise.

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

**Responses to Environmental Information Request
Dated February 13, 2019**

- b. The correct distance to the closest NSA is 500 feet. The NSA location was shifted to a residence closer to the railroad crossing than the previously listed NSA. The modeled sound levels were updated accordingly. See updated Figure 9.3-11 and Tables 9.3-11 and 9.3-12 below.

REVISED Table 9.3-11						
Predicted Temporary Sound Levels Due to HDD / Railroad Crossing						
HDD and Railroad Crossing	Distance and Direction of the Closest NSA to Site Center	Existing Ambient	Calculated Sound Level		Existing Ambient L_{dn} Plus L_{dn} of Operations	Temporary Change in the Ambient Sound Level
		L_{dn} dBA	Leq dBA	L_{dn} dBA	L_{dn} dBA	L_{dn} dBA
Dan River HDD	1400 feet N	39.7	46.5	52.9	53.1	13.4
Stony Creek Reservoir HDD	300 feet NW	42.8	54.2	60.6	60.7	17.9
Railroad Crossing 1	3550 feet E	58.9	38.7	45.1	59.0	0.2
Railroad Crossing 2	3000 feet S	41.1	31.9	38.3	42.9	1.8
Railroad Crossing 3	250 feet NW	45.5	63.1	69.5	69.5	24.0
Railroad Crossing 4	500 feet N	48.9	58.8	65.2	65.3	16.4

REVISED Table 9.3-12					
Predicted Temporary Sound Levels Due to HDD / Railroad Crossings with Noise Mitigation					
HDD Crossing (Entry or Exit Site)	Distance and Direction of the Closest NSA to Site Center	Existing Ambient	Calculated L_{dn} of the Operations	Existing Ambient L_{dn} Plus L_{dn} of Operations	Temporary Change in the Ambient Sound Level
		L_{dn} dBA	L_{dn} dBA	L_{dn} dBA	L_{dn} dBA
Stony Creek Reservoir HDD	300 feet NW	42.8	48.6	49.6	6.8
Railroad Crossing 3	250 feet NW	45.5	57.5	57.8	12.3
Railroad Crossing 4	500 feet N	48.9	53.2	54.6	5.7

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 9 – Air Quality and Noise

Noise

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;
- b. 24-hour construction of Railroad Crossings 1 and 2;
- c. maintenance blowdown at the Lambert Compressor Station; and
- d. emergency shutdown of the Lambert Compressor Station.

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

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 9 – Air Quality and Noise

Noise

130. Confirm if noise impacts in section 9.3.3.3 were assessed for HDD entry point and exit point equipment operating concurrently. Provide the expected duration of each HDD event.

Response:

Noise impacts in Section 9.3.3.3 were assessed for both entry and exit equipment operating simultaneously.

The expected drilling duration is 8-12 weeks for the Dan River crossing in Virginia and 8-12 weeks for the Stony Creek Reservoir crossing in North Carolina under normal circumstances. If issues arise during drilling, the duration may increase.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 9 – Air Quality and Noise

Noise

131. Per the discussion in section 9.3.5.1, the Lambert Compressor Station was modeled with one 10,915 horsepower (hp) Titan 130 turbine and one 15,900 hp Mars 100 turbine. Note that the Taurus turbine is rated at 11,792 hp and the Mars turbine is rated at 17,123 hp. Clarify this discrepancy and confirm whether the Titan 130 turbine or Taurus turbine would be used. Confirm that the noise model is a typical operational scenario.

Response:

The discussion text in section 9.3.5.1 is incorrect and should indicate that the model was based on a Taurus 70 rated at 11,792 hp and a Mars 100 rated at 17,123 hp. The reference to a Titan compressor unit was incorrect and should have referenced a Taurus unit. The noise model and all calculation results are based on the correct typical operational scenario for the Lambert Compressor Station.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 9 – Air Quality and Noise

Noise

132. Provide the estimated noise levels from an emergency shutdown event at the nearest NSA.

Response:

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 CS 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_{max}. 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_{max} 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

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 10 – Alternatives

133. Regarding the analysis of the Pollock Farm route variation, Mountain Valley did not identify disadvantages that would outweigh the advantages of incorporating the route variation. Provide reasons for why this route variation was not incorporated. Provide an evaluation of an alternative route variation that reduce the Project's impact on Mr. Robert Pollock's property.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 10 – Alternatives

134. As previously requested in our pre-filing comments on draft RR10, dated October 5, 2018, provide revisions to the comparison tables in 10.5, 10.6, and 10.7 to include the following information in each table:

- a. residential land, and commercial/industrial land;
- b. unlisted/potential eligible historic properties;
- c. national trails, recreation trails, and other recreational areas;
- d. forest areas; and
- e. consistent reporting of environmental impacts.

Response:

The Project will provide revisions to the comparison tables in 10.5, 10.6, and 10.7 to include the requested information this request. a through e within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 10 – Alternatives

135. Reconcile the discrepancy between the number of acres required for construction between tables 1.3-2 and 10.7-2.

Response:

The Project will reconcile the discrepancy between the number of acres required for construction between Tables 1.3-2 and 10.7-2 within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 10 – Alternatives

136. In response to Ms. Katie Whitehead's comments submitted to the FERC Project Docket on September 11, 2018 (accession number 20180911-5002), address her concerns regarding an alternative route that avoids her property. Provide an analysis of route variations that were considered by Mountain Valley to avoid her property. Identify the alternative route that she states was provided to her at Mountain Valley's open house on June 28, 2018, and explain why this route variation was not incorporated into the final route.

Response:

The Project continues to evaluate a route variation that would avoid Ms. Katie Whitehead's property. The Project will provide an analysis of this variation within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 10 – Alternatives

137. In response to Mr. and Mrs. Shambley's comments submitted to the FERC Project Docket on December 3, 2018 (accession number 20181203-5059), provide an analysis of route variations that would avoid or reduce impacts on the site where they are planning to construct a new home and install a septic system.

Response:

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.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 10 – Alternatives

138. Provide an analysis of route variations that would avoid or reduce impacts on groundwater wells and/or septic systems for the following property owners:

- a. Mr. Bombardier, comments submitted to the FERC Project Docket on August 20, 2018;
- b. Mrs. Moore, comments submitted to the FERC Project Docket on August 20, 2018;
- c. Mrs. Ore and Mr. Cowan, comments submitted to the FERC Project Docket on August 20, 2018;
- d. Mrs. Loeb, comments submitted to the FERC Project Docket on August 21, 2018;
- e. Mr. and Mrs. Marshall, comments submitted to the FERC Project Docket on August 21, 2018;
- f. Mr. and Mrs. Nicholson, comments submitted to the FERC Project Docket on August 21, 2018;
- g. Mr. and Mrs. Madrin, comments submitted to the FERC Project Docket on August 23, 2018; and
- h. Mr. Slade, comments submitted to the FERC Project Docket on August 23, 2018.

Response:

- a. The Project is evaluating a route variation that would avoid Mr. Bombardier's property. The Project will provide an analysis of this variation within the Supplemental Information Package to be submitted in March 2019.
- b. The Project is evaluating a route variation that would avoid Mrs. Moore's property. The Project will provide an analysis of this variation within the Supplemental Information Package to be submitted in March 2019.
- c. The Project is evaluating a route variation that would avoid Mrs. Ore and Mr. Cowan property. The Project will provide an analysis of this variation within the Supplemental Information Package to be submitted in March 2019.
- d. Based on a review of Mrs. Loeb comments, this tract of land will not be affected by the Project.
- e. Based on a review of Mr. and Mrs. Marshall's comments, this tract of land will not be affected by the Project.
- f. The Project is evaluating a route variation that would avoid Mr. and Mrs. Nicholson property. The Project will provide an analysis of this variation within the Supplemental Information

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Package to be submitted in March 2019.

- g. The Project is evaluating a route variation that would avoid Mr. and Mrs. Madrin property. The Project will provide an analysis of this variation within the Supplemental Information Package to be submitted in March 2019.
- h. Based on a review of Mr. Slade comments, this tract of land will not be affected by the Project.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Resource Report 11 – Reliability and Safety

139. Update and provide a revised table 11.2-1 that provides separate values by county for the Class 1 pipeline located at MPs 20.41 and 30.4.

Response:

A revised Table 11.2-1 will be provided within the Supplemental Information Package to be submitted in March 2019.

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

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

**Responses to Environmental Information Request
Dated February 13, 2019**

Federal Energy Regulatory Commission

Request:

Appendix 1-A Alignment Sheets

140. Update and provide revised alignment sheets to correct the following noted discrepancies.

- a. From table 1.9-2, these items are not identified on the alignment sheets:
 - Ground Bed – 4, MP 60.2;
 - Ground Bed – 1, MP 10.8;
 - Ground Bed – 2, MP 21.1; and
 - Ground Bed – 3, MP 44.9;
- b. From appendix 1-D, these items are missing:
 - table missing ATWS for H-605 Line; and
 - ATWS #1643, MP 68.8, mislabeled on alignment sheets as the arrow is not pointing to the correct feature;
- c. From appendix 1-E:
 - MPs 14.1 to 14.7 – Williams Transco Pipeline not labeled; and
 - Duke Power Electric Transmission not labeled on the alignments;
- d. From appendix 1-F, these items are missing from the alignments:
 - PA-PI-029, MP 12.4;
 - TA-PI-037, MP 15.2;
 - TA-PI-046A, MP 18.3;
 - TA-RO-072A, MP 27.0;
 - TA-RO-073A, MP 27.4;
 - PA-RO-000A, CY-08;
 - TA-RO-082A, CY-04;
 - TA-RO-082B, CY-07;
 - TA-RO-082C, CY-05;
 - TA-RO-082D, CY-05;
 - TA-RO-082E, CY-05;
 - PA-RO-114A, MP 42.2;
 - TA-RO-124A, MP 44.9; and
 - TA-GU-000, CY-09;
- e. From table 2.3-9, these items are missing from alignments:
 - S-B19-14, MP 63.2, p. 2-31;
- f. From appendix 2-A, these items are not labeled on the alignments:
 - S-E18-22, MP 10, on alignment sheet, not in table;
 - S-A18-140-2, MP 32;
 - S-A18-151-2, MP 33;
 - S-A18-154-2, MP 33;

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

Responses to Environmental Information Request
Dated February 13, 2019

- S-A18-154-3, MP 33;
- S-C18-38-2, MP 34.6;
- S-C18-38-3, MP 34.8;
- S-C18-38-4, MP 35;
- S-B18-117-2, MP 37.7;
- S-A18-4-2, MP 38.5;
- S-B18-74-2, MP 39.6;
- S-A18-210-2, MP 40.4;
- AS-APS-01, MP 47.7;
- S-B18-59-2, MP 55.3;
- S-A18-125-2, MP 56.6;
- S-A18-125-3, MP 56.6;
- S-A18-125-4, MP 56.6;
- S-B18-22-2, MP 63.1;
- S-B18-12-2, MP 63.1;
- S-B18-12-3, MP 63.1;
- S-B18-12-4, MP 63.1;
- S-B18-12-5, MP 63.2;
- S-B18-12-6, MP 63.2;
- S-B18-14, MP 63.2;
- S-B18-14-1, MP 63.2;
- TA-PI-061, MPs 22.6 to 22.7, continues off map, S-E18-38, S-E18-39, and S-E18-40 not shown;
- TA-PI-063, MP 24, continues off map, S-E18-32 not shown;
- TA-PI-067, MP 25, continues off map, S-C18-88 not shown;
- TA-RO-073A, MP 27.4, AS-NHD-6003, AS-A18-40 not shown;
- TA-RO-076, MP 28.3, S-A18-24 not listed in table;
- PA-RO-000, MP 28.6, continues off map, AS-NHD-6002 not shown;
- TA-RO-089, MP 34.1, continues off map, S-C18-50 not shown;
- TA-RO-29, MP 46.7, continues off map, S-A18-239 not shown;
- TA-RO-139, MP 50.2, continues off map, S-C18-71 not shown;
- TA-AL-172, MPs 63.7 to 63.8, continues off map, AS-B18-138/AS-B18-137 not shown;
- TA-AL-179A, MP 66.5, continues off map, AS-NHD-7000 not shown;
- TA-AL-180, MP 67.3, continues off map, AS-APP-5006 not shown; and
- Aboveground facilities not on alignment sheets:
 - CY-05;
 - AS-NHD-115, MP 30.6;
 - AS-A18-248/S-A18-248, MP 30.6; and
 - AS-APP-1569, MP 30.7;
 - CY-06;
 - AS-A18-246/S-A18-246 MP 30.7; and
 - S-A18-247, MP 30.7;

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

Responses to Environmental Information Request
Dated February 13, 2019

- g. From appendix 2-B, these items are not labeled on the alignments:
- AW-D18-23, MP 14.3;
 - W-A18-33, MP 28.3, mislabeled on the alignment sheets, arrow pointing to wrong feature;
 - W-B18-39, MP 30.2;
 - Aboveground facilities not on alignment sheets:
 - CY-05;
 - W-A18-249, MP 30.6;
 - AW-NWI-540, MP 30.7; and
 - AW-NWI-541, MP 30.7;
 - CY-06;
 - W-A18-245; and
 - T15 Dan River Interconnect;
 - AW-B18-36, MP 30.3;
 - TA-PI-043, MP 17.1, continues off sheet, W-F18-46 not shown;
 - TA-PI-052, MP 20.5, continues off sheet, W-F18-54 not shown;
 - TA-PI-061, MPs 22.6 to 22.7, continues off sheet, W-E18-37 not shown;
 - TA-PI-063, MP 24, continues off sheet, W-E18-31 not shown;
 - TA-PI-067, MP 25, continues off sheet, W-C18-87 not shown; and
 - TA-RO-080, MP 29.7, p. 2-B-9, continues off sheet, W-A18-20 not shown;
- h. From table 8.2-6, these items are not shown on the alignments:
- Southern Railroad, MP 25.9; and
- i. From appendix 8-B, these items are not shown on the alignments:
- State Road 1982/Wolf Island Road, MP 36.6, labeled as “Mount Island Rd” on alignment sheet 39, but “Wolf Island Rd” on sheet 40;
 - Hidden Valley Trail Road crossing (approx. MP 64.4), not identified in table;
 - Fauchette Lane/Jim Barnwell Rd intersection (approx. MP 64.8), Jim Barnwell Rd not identified in table; and
 - State Road 1935/Stone St., MP 69.8, not labeled in Horizontal Stationing.

Response:

The Project will provide necessary updated tables and appendices reflecting the Project’s revised alignment and newly obtained survey data within the Supplemental Information Package to be submitted in March 2019. Revised alignment sheets depicting this updated information and addressing the discrepancies identified as part of this request will also be provided within the Supplemental Information Package to be submitted in March 2019.

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