



August 25, 2017

Ms. Ann Rogers
Preserve Roanoke
6347 Back Creek Road
Boones Mill, VA 24065

**Subject: Mountain Valley Pipeline Project
Response to Accession # 20170713-5027 (July 12, 2017)
DHR File No. 2014-1194; FERC Docket No. CP16-10**

Ms. Rogers,

Mountain Valley has reviewed Preserve Roanoke's comments submitted July 12, 2017. To address specific concerns outlined in those comments, Mountain Valley provides the following responses.

1. Naming and Indexing of Documents Submitted to the FERC Docket

Mountain Valley typically includes a transmittal letter with each FERC filing to outline the documents included in each attachment. For example, if you refer to the transmittal letter included in the May 10, 2017 submission referenced in your comment (identified on the docket as "Transmittal for MVP data responses 5-10-17"), you will see that it provides the index that your comment requests. If an attachment exceeds the FERC eLibrary's 50 MB limit, the file has to be broken into smaller documents. In that case, each file is named the same with a sequential number at the end (e.g., "Part 1 of 7"). Appendices are attached to each respective document. While there may be multiple "Appendix A," for example, each appendix is associated with a report.

2. Methodology for Criteria of Effects Assessment

Mountain Valley strongly disagrees with the characterization of its Criteria of Effects Assessment methodology as "minimalist." As detailed below, the comprehensive, multi-step methodology employed for the assessment was developed by a team of experts (Tetra Tech) in accordance with the Virginia Department of Historic Resources (DHR)'s guidance and in consultation with DHR's staff.

Mountain Valley met with DHR staff at DHR's office in Richmond on November 15, 2016, to discuss Mountain Valley's progress in implementing the tools of analysis described in the "*Methods for Historic Architecture Criteria of Effects Assessment for Virginia*" (Methods). At the meeting, Mountain Valley acknowledged that due to the fact that visual effects cannot be quantitatively measured and may not harm the elements of a historic property in a physical manner, assessing visual effects on historic properties relies primarily on subjective analysis. As such, Mountain Valley noted that the Methods were designed to employ quantifiable tools of analysis when at all possible. Furthermore, Mountain Valley noted that in accordance with DHR's guidelines for *Assessing Visual Effects to Historic Properties*, Task 3 of the visual effects

assessment considers properties' historic significance and aspects of integrity. The guidelines state:

...it is possible to remove much of the bias from the process by gaining knowledge about the historic property visually affected. An historic property is affected when its historic integrity, that is, those characteristics that convey a resource's significance, has been diminished. Therefore, determining why a property is significant and understanding what characteristics make it so are essential to assessing visual effects.

http://www.dhr.virginia.gov/pdf_files/Assessing_Visual_Effects_JUN10.pdf

It should also be noted that, in accordance with these guidelines, the Criteria of Effects assessment considered Mountain Valley's visual effects to historic properties. For individual National Register of Historic Places-eligible (NRHP) or listed properties, Mountain Valley simulated views from the historic properties towards the pipeline and associated facilities. For NRHP-eligible or listed historic districts, Mountain Valley simulated views from both primary contributing resources and from publicly accessible arterial thoroughfares towards the pipeline and associated facilities. These efforts accounted for visual effects to not only individual resources that contribute to the districts' historic significance, but also for visual effects as experienced by someone traveling through the districts. The guidelines state:

...it is necessary to evaluate the changes and alterations the new feature will introduce, physically and visually, to the historic property.

Once photo-simulations are available to provide an accurate understanding of how much of a new facility will be visible from a historic property and from where, one may then begin to assess the visual effect that the undertaking will have on the resource.

DHR requested that Mountain Valley submit the reporting for the results of the impact analyses in phases according to the respective task numbers outlined in the Methods. As Tasks 1 through 3 involved the elimination of resources from further assessment based on visual impact analysis and consideration of historic significance and aspects of integrity, this phased approach to reporting assured DHR the opportunity to comment on the historic properties considered by Mountain Valley at each level of assessment.

As noted in DHR's July 7, 2017, letter regarding Mountain Valley's *Criteria of Effects Report*:

In coordination with DHR, consultants from Tetra Tech developed a phased approach to evaluate potential visual effects from the Mountain Valley project on the 188 architectural properties identified as being within the project Area of Potential Effects (APE). At each successive step, Tetra Tech, in consultation with DHR, was able to eliminate from further visual effect analysis all but nine (9) historic properties.

3. Key Observation Point (KOP) Selection Process for Historic Districts

The KOPs were not arbitrarily chosen. They were determined by application of a documented selection process applying clearly stated criteria and in consultation with relevant expert agencies. A desktop review resulted in the selection of publicly accessible KOPs at locations within the historic districts, determined in previous steps of assessment to have a view of the Project, for field data collection and, ultimately, photograph simulation. The selection of KOPs from arterial thoroughfares within the historic districts was requested by DHR staff during the November 15, 2016, meeting between DHR and Mountain Valley at DHR offices in Richmond, Virginia. Maps depicting these selected KOPs were provided to DHR for review and comment January 10, 2017, prior to photographic simulation production; DHR provided no comments to Mountain Valley on the selected KOPs.

The proposed Coles-Terry Rural Historic District is very different in terms of its land cover than the other historic districts crossed by Mountain Valley's proposed route as it is very densely forested. The low number of publicly accessible rights-of way in proportion to the approximately 2,500-acre district boundary, combined with the heavily forested terrain, inherently reduces the number of KOPs from which project features would be visible.

KOPs for the Appalachian Trail Historic District and Blue Ridge Parkway Historic District were chosen in consultation with the US Forest Service (USFS) and the National Park Service (NPS) as part of the Visual Impact Analysis (VIA) Mountain Valley provided to those agencies. It is anticipated that the USFS and NPS will provide comments regarding visual impacts on these historic districts.

4. Consideration of Landscape (or the "spaces between") in Criteria of Effects Assessment for Historic Districts

As explained in Chapter 3 of the *Criteria of Effects Report*, the interpretation the photo simulations produced for each district first required the identification of character-defining features of the landscape and an analysis of historic and current land use (landscape integrity), particularly as it pertains to historic districts qualifying as rural historic landscapes. As such, the scope of Task 4 was expanded as the Methods were implemented. The photo simulations were utilized in conjunction with other tools of analysis for a multi-dimensional assessment of direct and indirect impacts on the built environment and surrounding landscape.

Your letter's characterization of this approach as arbitrary and capricious is unwarranted. No generally accepted methodology existed for evaluating the visual effects of a buried natural gas pipeline on an entire historic district, and therefore Mountain Valley had to develop one in consultation with DHR. The chosen methodology—evaluating visual impacts on each district by analyzing a reasonable number of vistas and KOPs throughout the district—represents a practical approach to cataloging such impacts and providing a reasonable basis upon which to determine if those impacts singly or collectively rise to a level of significance.

5. DHR Consultation and Guidance

Mountain Valley's consultation with DHR is thoroughly documented in the *Criteria of Effects Report* and specific aspects of that consultation and related guidance received from DHR in regards to your specific concerns are highlighted in #2 through #4 above. Consultation between Mountain Valley and DHR related to the approach, methods, and results of the Criteria of Effects assessment is summarized below.

Discussed at a January 12, 2016, meeting between Mountain Valley and DHR staff were approaches to the Criteria of Effects assessment. At that meeting, visual effects were identified as having the potential to impact the largest number of historic properties because of the aerial extent of the area of potential effect (APE) related to visual effects. Other effects, including those directly related to construction or post-construction operation of Mountain Valley, were recognized as possible but much more limited in geographical scope.

During a telephone conversation August 8, 2016, between DHR staff and Mountain Valley, DHR requested that Mountain Valley compile a list of known NRHP-eligible and -listed historic architectural resources within the direct and indirect APE in Virginia to be submitted to DHR together with a scope for the evaluation of potential impacts on historic resources in the list. Following the meeting, Tetra Tech developed the Methods that was submitted to the DHR for review and comment on September 22, 2016. A list of known NRHP-eligible and -listed historic architectural resources within the Project's direct and indirect APE in Virginia (Master List) was submitted as Appendix 1 to that document.

On October 19, 2016, DHR indicated that it "supports the methods presented in the document" prepared by TetraTech and further noted that the Master List "appears complete based on the studies to date." MVP met with DHR staff at DHR offices in Richmond on November 15, 2016, to discuss MVP's progress in implementing the tools of analysis described in the Methods. At the meeting, DHR requested that MVP submit the reporting for the results of the impact analyses in phases according to the respective task numbers outlined in the Methods. As Tasks 1 through 3 involved the elimination of resources from further assessment based on visual impact analysis and consideration of historic significance and aspects of integrity, this phased approach to reporting assured DHR the opportunity to comment on the historic properties considered by MVP at each level of assessment.

The results of Task 1 were summarized in a report submitted to DHR January 9, 2017. DHR responded to Tetra Tech by letter on February 9, 2017, indicating that, as previously agreed upon, it "approves of this approach to refine the indirect APE and consider the effects of the MVP project on only those architectural resources that will have a demonstrated view of the new pipeline, associated facilities, and vegetative clearing along the corridor." In the letter, DHR requested additional clarification in regards to the seasonal coverage of the National Land Cover Dataset (NLCD). DHR noted that results could be different depending on the season the data depicts and indicated that fall and winter information represents a "worst case scenario" and recommended this to be "the most appropriate data set to use." Tetra Tech provided clarification regarding this

issue in the subsequent Tasks 2 and 3 summary report on page 5 in the section entitled, “Task 2: Viewshed and Viewpoint Analysis: Step 1- Viewshed Analysis.” Tasks 2 and 3 were submitted in one package to DHR February 15, 2017, and were accepted by DHR by letter dated March 22, 2017.

DHR responded to Tetra Tech by letter on March 22, 2017, confirming that “After implementing Tasks 1, 2, and 3 of the agreed upon methodology for the viewshed and viewpoint analysis, Tetra Tech eliminated all but nine (9) NRHP-eligible or listed properties from further study under Task 4.” In that correspondence, DHR concurred that the historic properties identified by Tetra Tech as requiring additional analysis are Newport Historic District (035-0151), Greater Newport Rural Historic District (035-0412), Cemetery (035-0412-0465), Big Stony Creek Historic District (035-5127), North Fork Valley Rural Historic District (060-0574), Barn (060-0574-0125), Bent Mountain Rural Historic District (080-5677), Cabin (080-5677-0006), and Coles-Terry Rural Historic District (080-5689). DHR stated that “Based on the information provided, DHR concurs with the consultant’s recommendation that these nine (9) properties warrant further study under Task 4 of the established viewshed and viewpoint analysis.”

At a meeting held on March 27, 2017, Mountain Valley discussed the status of the project and the plan for completing Task 4 of the visual effects assessment and other effects assessments, including construction-related and operation-related effects. Mountain Valley cultural resources staff explained the manner in which Task 4 had evolved as the evaluation process was implemented. MVP noted that the Methods as agreed upon by DHR in October 2016 largely focused on visual impacts, but the photo simulations in Task 4 became only one of many tools of analysis in order to assess direct and indirect impacts on the built environment and the historic landscape, specifically as it pertains to historic districts qualifying as rural historic landscapes.

Mountain Valley and DHR agreed at this meeting that a comprehensive report would be created that would include the previously reviewed Tasks 1, 2, and 3 documentation as well as the Task 4 results and additional assessment of effects related to construction and operation of the proposed Mountain Valley facilities. Mountain Valley submitted the comprehensive *Criteria of Effects Report* on May 15, 2017.

DHR provided comments on the comprehensive report in a July 7, 2017 letter. In that letter DHR found that:

Based on the submitted analyses, DHR agrees with the consultant that the expected visual (indirect) impacts from Mountain Valley on the Newport Historic District, Greater Newport Rural Historic District, Big Stony Creek Historic District, Bent Mountain Rural Historic District, and Coles-Terry Rural Historic District do not significantly diminish those characteristics which make them eligible for listing in the NRHP...DHR believes that the indirect visual effects of the Project will significantly diminish and adversely affect the feeling and setting of the North Fork Valley Rural Historic District.

...the Greater Newport Rural Historic District, Big Stony Creek Historic District, North Fork Valley Rural Historic District, Bent Mountain Rural Historic District, and Coles-Terry Rural Historic District will be adversely affected by Mountain Valley bisecting them and leaving a permanent fifty-foot wide imprint on their landscapes. This condition is incompatible with the existing rural character of the districts, which derive much of their historic significance and NRHP-eligible status from that very agrarian setting and feeling the undertaking will diminish. The adverse effect to the five historic districts will require mitigation to be determined through future consultation with DHR and other stakeholders and memorialized in the Programmatic Agreement (PA) for the undertaking.

DHR, in its review of the *Criteria of Effects Report*, disagreed with Mountain Valley's consultant's recommendation of no adverse effect to five historic districts crossed by the proposed Project (Big Stony Creek Historic District, Greater Newport Rural Historic District, North Fork Rural Historic District, Bent Mountain Rural Historic District, and Coles-Terry Rural Historic District); however, DHR did not disagree with the methods employed to complete the effects assessment.

DHR's thorough review of Mountain Valley's submittals assures that the impacts of the proposed Project have been appropriately identified and addressed through the Section 106 process.

6. Effect on Aquatic Features Contributing to Historic Integrity

As noted in the *Criteria of Effects Report*, a rural historic landscape is defined in the U.S. Department of Interior (DOI), NPS' Guidelines for the Documentation and Evaluation of Rural Historic Landscapes (Revised 1999) as:

a geographical area that historically has been used by people, or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features.

Natural features such as streams and rivers can play a key role in defining rural historic district boundaries and can play in role in conveying a district's historic significance. Mountain Valley acknowledges that it is possible that the NRHP-eligible Coles-Terry Rural Historic District contains numerous aquatic resources that contribute to the district's historic significance or that help define the district's recommended NRHP boundary.

Mountain Valley does not agree, however, that the project would affect how these aquatic resources convey their historic association or relationship with the district. Stream crossing techniques and best management practices are governed by stringent federal and state requirements, including permits and approvals issued or expected to be issue by the FERC, U.S. Army Corps of Engineers (USACE), DEQ, and, for some streams, the Virginia Marine Resources Commission. Among other things, these requirements ensure that the erosion and sedimentation of streams is minimized and that stream bed and banks are restored to their pre-construction contours immediately following construction. All streams and wetlands throughout the entire pipeline route must be surveyed and delineated (subject to federal and state review and approval),

including the unmapped and unnamed tributaries that do not appear on topographic maps, and none may be impacted without a permit from the USACE and/or DEQ. There is no reasonable basis for your comment's assertion that the pipeline's crossing of aquatic resources would adversely affect the district's integrity of location, design, setting, materials, workmanship, feeling, and association.

7. Potential Impacts to Blue Ridge Parkway Historic District

Mountain Valley strongly disagrees with your characterization of the project as having "dire impacts" to the Blue Ridge Parkway Historic District directly and/or indirectly through impacts to the Coles-Terry Historic District and Adney Gap.

a. Measures to Avoid and Minimize Permanent Impacts to the Blue Ridge Parkway Historic District

The pipeline as proposed would cross the Blue Ridge Parkway Historic District in Roanoke County, Virginia close to Adney Gap. In May 2014, Mountain Valley performed a detailed analysis of potential routes for the Project, including multiple potential crossing locations for the Blue Ridge Parkway (BLRI) and the Blue Ridge Parkway Historic District that comprises it. The analysis studied 94 corridor segments, including 2,362 miles of potential alternative routes. There are no routes from the origination of the pipeline to its terminus that would avoid crossing the BLRI. The proposed location is the only feasible location to cross the BLRI within relatively flat, non-forested, open land, thereby minimizing tree clearing and other construction disturbance on or near the BLRI and, in turn, the area of Adney Gap.

Mitigation measures and Best Management Practices (BMPs) would be applied individually and combined to reduce or eliminate impacts and were considered in cooperation with and guided by on-site meetings with a representative from the NPS on December 14, 2016. These measures would minimize visual change where Mountain Valley crosses the BLRI close to Adney Gap. The mitigation measures that Mountain Valley proposes to implement are:

- The right-of-way would be feathered in selected forested areas visible from managed vistas to reduce the contrast of the right-of-way and ensure that vegetative openings appear more natural and in conformance with the natural form, line, color, and texture of the existing landscape;
- The project would cross the BLRI at a perpendicular angle to ensure the shortest duration of view for the crossing;
- The project would use conventional bore methods to construct the pipeline under the parkway itself, ensuring there would be no disruptions to the traffic flow along the BLRI;
- The project's alignment has been sited to conform to the natural lines in the landscape including crossing the BLRI in an open pasture landscape;

- The disturbed area of the right-of-way would be restored in accordance with Project Specific Standards and Specifications and site-specific Erosion and Sediment Control Plans approved by the Virginia Department of Environmental Quality (DEQ). Contrary to your comments about the creation of compacted “grassy highway” through the farm fields of Adney Gap that will never be returned to its previous condition, the Standards and Specifications require that the disturbed area (except for cultivated cropland) would be returned to its original contours; the topsoil would be replaced; the subsoil and topsoil will be disced to avoid compaction (and subsequently tested to ensure soil compaction conditions match pre-construction conditions); native seed mixes developed in consultation the Wildlife Habitat Council, Virginia Department of Conservation and Recreation, U.S. Fish and Wildlife Service, and U.S. Forest Service, and approved by DEQ, would be applied; mulch would be added to protect the seed and soil; and the area would be monitored to ensure that the vegetation is established. Cultivated croplands would be returned to their prior cultivated uses;
- Mountain Valley would narrow the temporary construction right-of-way to 75 feet for an approximate distance of 75 feet, which would reduce visual impacts from tree clearing. Mountain Valley plans to take a permissive approach to requests for co-location of other utilities’ infrastructure, as demonstrated by Mountain Valley’s recent position regarding a request for co-location of Appalachian Electric Power’s proposed buried 34.5-kV electric utility line. With moderate and low visual impacts as well as the implementation of the mitigation measures and BMPs listed above, the Project would not result in significant visual impacts on visual resources on the BLRI or Adney Gap.

b. Use of Herbicide in Pipeline Corridor Visible from Blue Ridge Parkway Historic District

Mountain Valley would not utilize herbicides or pesticides to control vegetation within the pipeline corridor unless requested to do so by a state or federal agency. No agency has requested the use of herbicides or pesticides within the vicinity of Adney Gap. Your assertion that farmers using Adney Gap for cattle grazing will erect fencing to protect their cattle and/or cease their use of these pastures due to herbicide use is unfounded.

c. Impacts to Coles-Terry Rural Historic District Potentially Affecting the Blue Ridge Parkway Historic District

Mountain Valley disagrees with your characterization that construction within the Coles-Terry Rural Historic District “will drastically alter the appearance of Poor Mountain,” thereby affecting the integrity of the Blue Ridge Parkway Historic District. Mountain Valley also disagrees unfounded statements that the Hill Studio simulation reproduced in your letter is a high-quality visualization and the corresponding Tetra Tech simulation is a low-quality image. The visual simulations that Mountain Valley has provided in its filings were prepared by Tetra Tech according to accepted industry standards for developing visually accurate simulations. The methods used to prepare the simulations presented in the Visual Impact Assessment (VIA) for the Blue Ridge

Parkway, including details regarding right-of-way (ROW) width and vegetative cover conditions, are disclosed in the document. Mountain Valley has reviewed the simulation products prepared by Hill Studio, but to Mountain Valley's knowledge neither Hill Studio nor the organizations that have presented those simulations have disclosed the specific methods that Hill Studio used to prepare its simulations.

Review of the Hill Studio simulation for Poor Mountain Overlook indicates that it displays an exaggerated and inaccurate right-of-way width. Mountain Valley proposes to use a 50-foot-wide permanent right-of-way for the project in this location, and that specification was used in the Tetra Tech simulation for the Poor Mountain Overlook (see the BLRI VIA, Appendix D, KOP 49). The Tetra Tech and Hill Studio simulations both show the existing view from that overlook, in which an existing transmission line corridor is a prominent feature. The existing transmission line corridor includes two high-voltage powerlines on lattice-steel towers, and the cleared corridor is over 200-feet-wide. Based on the comparative size of the existing transmission corridor and the two simulated images for the project right-of-way, the Hill Studio simulation appears to depict a right-of-way at least 150-feet-wide. Therefore, the Hill Studio simulation depicts an MVP right-of-way that is three times wider than what Mountain Valley has proposed.

The Hill Studio simulation also does not accurately show the visual condition of the right-of-way after the MVP Project has been constructed. As stated in the VIA (page 6) and discussed in Response 7.a above, the simulation provided by Mountain Valley displays how the project right-of-way would appear in the long term, based on use of site-specific reclamation techniques such as replanting the disturbed area with native seed mixtures). Although Hill Studio has not disclosed how it prepared its simulation for Poor Mountain, it is likely that the studio simply transferred the color and texture of the existing transmission line corridor to the project right-of-way. Mountain Valley has not investigated the right-of-way maintenance practices employed on the existing transmission line corridor, but we do know what reclamation practices we have proposed for the project and are confident that the Tetra Tech simulation accurately depicts the future appearance of the MVP right-of-way.

Finally, Mountain Valley disagrees strongly with the incorrect assertion in the comment that "Tetra Tech's dismissive statement that the MVP pipeline corridor, as viewed from the Poor Mountain Overlook, would blend in visually with other utility corridors on Poor Mountain is egregiously untenable." The actual statements in the BLRI VIA (page 12) regarding the conditions at the Poor Mountain Overlook include the following:

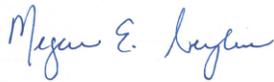
Parallel electric transmission lines and the associated ROW crossing a ridge in the middleground introduce a prominent element of the view, and several communication towers that are visible create vertical human-made elements.

Although the Project ROW is visible in the simulation, the existing electric transmission ROW would create a co-dominant relationship with the Project pipeline within this view.

Based on the current landscape conditions, including the existing modifications of the natural landscape that are prominent features, the existing scenic quality for this location was rated as Class C. Tetra Tech did not state that the MVP right-of-way would “blend in visually” with other utility corridors, but rather stated that the project would be co-dominant with the transmission line corridor. More to the point, it should be apparent that existing evidence of industrialization has already affected the scenic integrity of the view from Poor Mountain Overlook, and the incremental visual effects of the MVP Project would be limited.

Mountain Valley appreciates this opportunity to provide responses to your comments. If additional clarification is needed, you may contact me by telephone at (724) 873-3645 or by e-mail at mneylon@eqt.com if you have questions.

Thank you for your attention.
Sincerely,



Megan E. Neylon
Senior Environmental Coordinator

cc: Mr. Roger Kirchen, DHR