

Mountain Valley Pipeline Project

Docket No. CP16-10-000

Attachment DR4 General 3b4



March 2, 2017

National Park Service
ATTN: Mary Krueger, Energy Specialist
Resource Planning & Compliance
Northeast Region
15 State Street
Boston, MA 02109

Re: Comments on the Federal Energy Regulatory Commission (FERC) Draft Environmental Impact Statement (DEIS) for the Proposed Mountain Valley Project by the Mountain Valley Pipeline Company, LLC and proposed Equitrans Expansion Project by the Equitrans LP; FERC No. CP16-10-000, CP16-13-000; West Virginia and Virginia

Dear Ms. Krueger:

Please see the following responses by Mountain Valley Pipeline, LLC (MVP or Mountain Valley) to the United States Department of the Interior's (DOI) December 22, 2016 comments, including those from the National Park Service (NPS) on the Federal Energy Regulatory Commission (FERC) Draft Environmental Impact Statement (DEIS) for the Proposed Mountain Valley Pipeline Project (Project).

NPS Comment No. 1: ANST [Appalachian National Scenic Trail] Route: maps of the ANST in the DEIS don't show the correct Trail centerline route.

Mountain Valley Response No. 1: Mountain Valley provided updated alignment sheets and a bore profile to the United States Forest Service (USFS). These documents were filed to the docket on December 22, 2016.

NPS Comment No. 2: ANST crossing location: there are two different ANST crossing locations for the proposed route in the DEIS

Mountain Valley Response No. 2: The POD includes the correct ANST crossing locations for the proposed route.

NPS Comment No. 3: Length of bore under ANST: Is listed as both 200 feet total and 600 feet total.

Mountain Valley Response No. 3: On June 24, 2016, Mountain Valley submitted to FERC Modification FS78, which is Mountain Valley's proposed crossing of ANST. For Modification FS78, Mountain Valley revised the crossing to be nearly 90 degrees and extended the bore length to 600 feet. The bore pits will be located approximately 283 feet from the ANST on the north side and approximately 317 feet from the ANST on the south side. The distance from the cleared pipeline right-of-way from the north to the ANST is approximately 273 feet and from the south is about 307 feet.

NPS Comment No. 4: Proposed as conventional bore, but an open cut trench is mentioned as a secondary option for crossing the ANST. The likelihood of using the secondary option is undisclosed and unclear.

Mountain Valley Response No. 4: Mountain Valley prepared an Appalachian National Scenic Trail Bore

Contingency Plan to evaluate additional options crossing the ANST. The ANST Bore Contingency Plan was filed to the docket as Attachment DR4 Alternatives 8 on February 9, 2017. Mountain Valley will first shift the bore entry ten feet to the east or west of the original bore entry and attempt another bore. Should a reattempted bore be deemed unsuccessful, Mountain Valley will employ one of two alternative trenchless bore methods discussed in the Contingency Plan. As a result of this analysis, Mountain Valley has eliminated open cut trench as a secondary option for crossing the ANST.

NPS Comment No. 5: Visual impact analysis on the ANST: is wholly deficient and essentially absent. See later discussion in these comments.

Mountain Valley Response No. 5: MVP submitted a visual analysis on the ANST to USFS on February 17, 2017.

NPS Comment No. 6: The NPS, ATC, and local trail clubs have not been consulted on the change that was adopted in July 2016, prior to release of the DEIS. This plan was just recently submitted to the NPS and we will need more time to review this information beyond the DEIS comment period and review process.

Mountain Valley Response No. 6: See response to Data Request - Land Use, Question 7.

NPS Comment No. 7: Columbia Gas of Virginia (CVG) Peters Mountain Variation: The CVG Peters Mountain Variation would cross the Trail in Craig County, VA. This alternative was proposed as an alternative crossing of the Jefferson National Forest and the ANST to increase the amount of collocation along an existing pipeline right-of-way. The conclusion drawn in the DEIS that this alternative does not offer a significant environmental advantage compared to the proposed route. The NPS identified substantive issues with the analysis and recommends this alternative be re-evaluated.

Mountain Valley Response No. 7: The CGV Peters Mountain Variation of the ANST is shown on the attached Figure 10.6-16 (Attachment 1). Mountain Valley developed the route of the CGV Peters Mountain Variation and the associated environmental analysis using the location of the ANST as depicted on Figure 10.6-16, and the analysis included in Section 3.5.1.5 and Table 3.5.1-5 of the DEIS is based on the location of the ANST and is therefore accurate. Of note, the variation crosses the location of the ANST only once.

This variation would pass through the Red Sulphur Public Supply District (PSD) Protection Watershed for about 6.3 miles versus about 1.2 miles for the proposed route. Within this watershed, the variation passes in close proximity to Rich Creek Spring and Coburn Spring, including crossing about 0.7 mile of the Source Water Protection Area for Coburn Spring and about 0.2 mile of the Red Sulphur PSD Zone of Critical Concern.

The variation would cross the ANST in a wooded area near the closed landfill northeast of the Celanese Plant. However, the CGV Peters Mountain Variation would move the pipeline crossing of Peters Mountain about 5 miles closer to the Angel's Rest overlook on the ANST, moving the pipeline to within 2 miles of Angel's Rest compared to 7 miles for the proposed route. Mountain Valley has prepared a viewshed map from the Angel's Rest overlook (see Attachment 2), which shows that about 6.5 miles of the variation, beginning at the crest of Peters Mountain, would be within the direct viewshed from this location. While other disturbances and linear features are within this same viewshed, the pipeline right-of-way would be a new and clearly visible linear feature. The variation would result in a significantly greater length of pipeline right-of-way visible from Angel's Rest, and from a significantly closer distance, than compared to the proposed route, and would therefore have a significantly greater visual impact.

Adoption of the CGV Peters Mountain Variation would move the pipeline into close proximity of

approximately eight additional residences that were not previously impacted by the Project. The Alternative would also increase the number of public roads crossed from one to nine. The CGV Peters Mountain Variation would result in the Project being constructed in much closer proximity to the New River and would parallel the River for approximately 1.4 miles.

Consistent with the analysis of other pipeline route alternatives evaluated in the DEIS, and consistent with FERC requirements, Mountain Valley has not conducted cultural resources field surveys for the CGV Peters Mountain Variation. Therefore, it is not possible to provide a comparative analysis of Project-specific surveyed cultural resources. However, using publicly available data for West Virginia (<http://157.182.4.178/shpo/viewer>) and data requested from Virginia (Virginia Cultural Resources Information System (V-CRIS)), there are two previously recorded cultural resource sites in proximity to the CGV Peters Mountain Variation in West Virginia and none along the corresponding segment of the October 2016 Proposed Route.

For the reasons described above, the CGV Peters Mountain Variation would not offer an environmental advantage over the proposed route.

NPS Comment No. 8: CVG Peters Mountain Variation: The route of the ANST on the maps showing the proposed and alternative crossing of the ANST is inaccurate.

Mountain Valley Response No. 8: Prior to the recent easement agreement between the USFS and Celanese that resulted in relocation of the ANST to the east of the CGV pipeline. The current CGV Peters Mountain Variation of the ANST is shown on the attached Figure 10.6-16, labeled as Attachment 1.

NPS Comment No. 9: CVG Peters Mountain Variation: A comparison of visual impacts on the ANST between these two routes is needed to inform impacts to the Trail as part of the alternative comparison.

Mountain Valley Response No. 9: Please see Response No. 8 and Attachment 1. The map contains a visual and cultural comparison of visual impacts on the ANST between the two routes.

NPS Comment No. 10: Also, Table 3.5.1-5 doesn't include any cultural resources to inform the comparison of impacts, which should be a significant component of any route comparison.

Mountain Valley Response No. 10: Please See NPS Response No. 7.

NPS Comment No. 11: CVG Peters Mountain Variation and State Route 635-ANST Variation: The map provided on page 3-48 of these two alternatives [Figure 3.5.1-7] does not accurately reflect the current ANST route.

Mountain Valley Response No. 11: Please see Attachment 1 for an updated map depicting the alternatives.

NPS Comment No. 12: State Route 635-ANST Variation: We noted that the written description of this analysis on page 3-50 needs correction to accurately reflect the environmental factors that would be impacted less by this alternative.

Mountain Valley Response No. 12: This section of the DEIS should include the following statement: "The SR 635-ANST Variation would be about 1.3 miles shorter than the corresponding segment of the proposed route and would affect fewer residences, perennial waterbody crossings, and side slopes. The SR 635-ANST Variation does not collocate the ANST crossing with an existing corridor. However, the proposed route would, overall, be more collocated with existing corridors by about 6 miles and would cross less of the Jefferson National Forest (3 fewer miles), FS-designated old growth forest, trails, and road less areas, as

well as less interior forest and shallow bedrock and fewer wetlands. For these reasons, the SR 635-ANST Variation alternative does not offer a significant environmental advantage when compared to the corresponding proposed route.”

The location of the ANST and Virginia State Route 635 crossing by the variation is at the lowest point in this area, making it impossible to perform a long conventional bore of the road and trail. The elevation variance from the bore launch pit to the bore receiving pit is approximately 46 feet. That elevation difference will require the bore receiving pit to be approximately 45-50’ deep. The alternative alignment would also generally parallel the ANST for about one mile after crossing the trail and Virginia State Route 635, increasing the possibility the pipeline right-of-way would be visible from locations along the trail. In addition, the SR 635-ANST Variation would move the pipeline crossing of Peters Mountain about 6 miles northeast of the proposed crossing, moving the ANST crossing to about 3.5 miles of the Wind Rock overlook on the ANST, compared to over 8 miles from the proposed route. Mountain Valley has prepared a viewshed map from Wind Rock (see Attachment 3), which shows that about 2 miles of the variation, beginning at the crest of Peters Mountain, would be within the direct viewshed from this location. The variation would result in a significantly greater length of pipeline right-of-way visible from Wind Rock, and from a closer distance, than compared to the proposed route and would therefore have a greater visual impact. Mountain Valley has also prepared a viewshed map from the Dragon’s Tooth overlook on the ANST (see Attachment 4) located about 23 miles southeast of the SR 635-ANST Variation. The viewshed map shows that no part of the SR 635-ANST Variation would be visible from the Dragon’s Tooth overlook.

Adoption of the SR 635-ANST Variation would move the pipeline into close proximity of approximately four additional residences that were not previously impacted by the Project. The route would also cross in close proximity to the Stony Creek Appalachian National Scenic Trail foot bridge.

Consistent with the analysis of other pipeline route alternatives evaluated in the DEIS, and consistent with FERC requirements, Mountain Valley has not conducted cultural resources field surveys for the SR 635-ANST Variation. Therefore, it is not possible to provide a comparative analysis of Project-specific surveyed cultural resources. However, using publicly available data for West Virginia (<http://157.182.4.178/shpo/viewer>) and data requested from Virginia (V-CRIS), there is one previously recorded site in proximity to the SR 635-ANST Variation and one in proximity to the corresponding segment of the October 2016 Proposed Route. Both the variation and corresponding segment of proposed route would also cross historic farmsteads near the crossing of Doe Creek Road, and the proposed route would cross the Big Stony Creek Rural Historic District.

For the reasons described above, the SR 635-ANST Variation would not offer an environmental advantage over the proposed route.

NPS Comment No. 13: AEP-ANST Variation: This route variation would cross the ANST west of the proposed crossing and at an existing AEP electrical line right-of-way and on land the NPS administratively transferred to the FS. As mentioned in our scoping comments, NPS and the FS have no authority to permit or issue rights of-way for petroleum product pipelines across lands NPS administratively transferred to the FS. However, if there is substantial public interest and environmental benefits associated with this alternative, authorization can be sought from Congress. It should be analyzed further to determine the extent of these environmental benefits.

Mountain Valley Response No. 13: The AEP-ANST variation would be approximately 3.3 miles longer than the proposed route and would result 50.7 acres more disturbance during construction and about 20 acres more permanent operation right-of-way than the corresponding segment of proposed route. The variation would also increase the length of the pipeline within the Jefferson National Forest by about 1.0 mile. The variation would pass through the Red Sulphur PSD Protection Watershed for about 4.1 miles

versus about 1.2 miles for the proposed route. The variation also passes within 100 feet of the Red Sulphur PSD Zone of Critical Concern. A portion of the variation also passes near known karst features including a cave and sinkholes. The variation would be about 950 feet upslope of Rich Creek Cave and Rich Creek Wilson Spring. The variation would affect 12.3 acres less interior forest and less USFS-designated inventoried semi-primitive areas and would be proximal to two fewer residences.

The location of the ANST crossing adjacent to the AEP right-of-way would be on the southern down slope, and the southern bore pit would likely be shielded from view by trail users at the crossing itself by a buffer of trees. However, the terrain alone at the crossing location would likely not shield the pipeline right-of-way from view. In addition, even if the actual trail crossing was accomplished by conventional bore, lengthy segments of the cleared pipeline right-of-way south of the trail crossing would be visible from the trail where the trail crests the ridge within the cleared AEP right-of-way. Based on initial desktop analysis, use of the existing AEP right-of-way crossing of the ANST would likely not meet the SIO of the Jefferson National Forest LRMP. Even though the variation would place the pipeline adjacent to an existing cleared right-of-way, the visual impact on ANST users would not be significantly different than the proposed route and would likely be greater because of the open view that trail users have from the trail where it is within the AEP right-of-way.

In addition to visual impacts on the ANST at the pipeline crossing itself, use of the variation would have higher visual impact from the Angel's Rest overlook than the proposed route. The variation would move the pipeline crossing of Peters Mountain about 3 miles closer to the Angel's Rest overlook (4 miles away, compared to about 7 miles by the proposed route). Mountain Valley has prepared a viewshed map from the Angel's Rest overlook (see Attachment 2), which shows that about 2.5 miles of the variation, beginning at the crest of Peters Mountain, would be within the direct viewshed from Angel's Rest. While other disturbances and linear features are within this same viewshed, including the existing AEP right-of-way, the pipeline right-of-way would be a new and clearly visible linear feature codominant with the AEP right-of-way. Because the variation would be 3 miles closer to Angel's Rest, the variation would result in a greater visual impact on the Angel's Rest viewshed than compared to the proposed route.

Adoption of the AEP-ANST Variation would move the pipeline into close proximity of approximately seven additional residences that would not otherwise be impacted by the Project.

Consistent with the analysis of other pipeline route alternatives evaluated in the DEIS, and consistent with FERC requirements, Mountain Valley has not conducted cultural resources field surveys for the State Route 635-Variation. Therefore, it is not possible to provide a comparative analysis of Project-specific surveyed cultural resources. However, using publicly available data for West Virginia (<http://157.182.4.178/shpo/viewer>) and data requested in Virginia (V-CRIS), there are no previously recorded sites in proximity to the AEP-ANST Variation or the corresponding segment of the October 2016 Proposed Route.

For these reasons, the AEP-ANST Variation does not offer a significant environmental advantage when compared to the corresponding proposed route.

NPS Comment No. 14: AT Crossing Methods: MVP proposes to cross the ANST using a conventional bore. MVP determined horizontal directional drilling (HDD) is not feasible at the proposed ANST crossing due to topography. FERC concurs with MVP that use of a conventional bore is preferable at the proposed ANST crossing location pending the results of geotechnical and/or geophysical analyses being prepared by Mountain Valley. The NPS requests to be notified when these analyses are available and to be consulted on options for ANST crossing methods.

Mountain Valley Response No. 14: See Response No. 4, above. Also see response to Data Request –

Alternatives, Question 8.

NPS Comment No. 15: AT Crossing Methods: As stated earlier, there is conflicting information in the DEIS regarding the distance between bore pits at the ANST crossing that needs to be corrected.

Mountain Valley Response No. 15: On June 24, 2016, Mountain Valley submitted to FERC Modification FS78, which is Mountain Valley's proposed crossing of the ANST. Using Modification FS78, Mountain Valley revised the crossing to be nearly 90 degrees and extended the bore length to 600 feet. The bore pits will be located approximately 283 feet from the ANST on the north side and about 317 feet from the ANST on the south side. The distance from the cleared pipeline right-of-way from the north to the ANST is about 273 feet and from the south is about 307 feet.

NPS Comment No. 16: AT Crossing Methods: Page 3-51 explains that the FS indicated they thought the south side of the ANST could meet its High Scenery Integrity Objective (SIO), but are uncertain if the bore pit location on the north side of the ANST could meet High SIO. The FS said a visual simulation modeling a leaf off scenario would be needed to further assess this point.

Mountain Valley Response No. 16: The bore pit location on the north side of the ANST will meet the High SIO. The Visual Impact Assessment submitted to USFS on February 17, 2017 includes leaf-off visual simulation modeling supporting this response.

NPS Comment No. 17: AT Crossing Methods: The NPS is very concerned that open cut trench construction is discussed as a secondary option for crossing the ANST with little to no context given on how viable a conventional bore is at the proposed location.

Mountain Valley Response No. 17: Mountain Valley prepared an Appalachian National Scenic Trail Bore Contingency Plan for the proposed crossing of the ANST and filed the plan to the docket as Attachment DR4 Alternatives 8 on February 9, 2017.

NPS Comment No. 18: AT Crossing Methods: The NPS requests additional information regarding the degree of confidence in a conventional bore at the potential ANST crossing location and how failure would be determined.

Mountain Valley Response No. 18: See Response No. 4, above.

NPS Comment No. 19: AT Crossing Methods: The geotechnical analyses needed to determine whether or not conventional bore is likely to succeed at the proposed ANST crossing should have been available and reviewed prior to releasing the DEIS.

Mountain Valley Response No. 19: See Response No. 4, above

NPS Comment No. 20: AT Crossing Methods: We did not find information on the potential to use HDD at the alternative ANST crossings and request this be provided to help gauge relative impacts on the ANST from each alternative.

Mountain Valley Response No. 20: Neither the AEP-ANST Variation nor the SR 635-ANST Variation offers a significant environmental advantage when compared to Mountain Valley's proposed crossing location. Therefore, Mountain Valley did not perform detailed HDD analyses for these variations. For this comment, Mountain Valley performed a cursory review of the terrain in the area of both variations. The AEP-ANST Variation is very similar to the analysis performed for the proposed location. Both variations are challenged by the terrain. The terrain directly affects the design of the pipeline (constructability), setup

of the HDD equipment, pipe staging and pullback all of which must be within the safe bending radii of the pipe. The risk of failure of the HDD bore at both locations is likely insurmountable. Given the topography limitations and potential risks for managing drilling fluid in karst aquifer, Mountain Valley does not recommend the use of HDD for these variations.

A detailed analysis is provided in the Mountain Valley prepared an Appalachian National Scenic Trail Bore Contingency Plan to evaluate additional options crossing the ANST.

NPS Comment No. 21: At a minimum, the following vistas should be analyzed as Key Observation Points and simulations prepared showing both leaf-on and leaf-off conditions: Kelly's Knob, Angel's Rest, Symm's Gap, Peter's Mountain Overlooks, Sugar Run Mountain View 2, Sinking Creek Mountain 2, and Audie Murphy.

Mountain Valley Response No. 21: The Visual Impact Assessment submitted to USFS on February 17, 2017 includes leaf-on and leaf-off analysis of the Key Observation Points identified in this request: Kelly's Knob, Angel's Rest, Symm's Gap, Peter's Mountain Overlooks, Sugar Run Mountain, Sinking Creek Mountain, and Audie Murphy.

NPS Comment No. 22: In addition, in order to accommodate this proposed route, another Forest Service Amendment is proposed to downgrade the Scenery Integrity Objective (SIO) that is in place to protect the ANST from "High" to "Moderate." The NPS is opposed to this. Modifying the SIO to accommodate a proposed project is counter to our long-standing approach to protecting the ANST. A lowering of the SIO for the ANST in any of the eight National Forests through which it traverses would be precedent setting.

Mountain Valley Response No. 22: The Visual Impact Assessment submitted to USFS on February 17, 2017 indicates that a lowering of the SIO for the ANST will not be required.

NPS Comment No. 23 For NHPA considerations, we find the current definition of the APE is too small and does not encompass some areas where there is a likelihood of potential significant visual impacts to the ANST.

Mountain Valley Response No. 23: MVP crosses federal, state, local, and private lands supporting a wide variety of land uses and natural landscape settings. The Area of Potential Effect (APE) is defined in the regulations implementing Section 106 of the NHPA, 36 CFR 800.1(d), as "The geographic area or areas that within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The APE is influenced by the nature and scale of an undertaking and may be different for different effects caused by the undertaking."

The MVP Project APE (direct and indirect) was developed in consultation with the West Virginia and Virginia State Historic Preservation Offices (SHPO). In accordance with guidelines of West Virginia and Virginia, and FERC, the APE for direct effects was determined to include all areas where ground-disturbing activities may take place. The APE for direct effects includes a corridor of 300 feet width in which MVP will bury the proposed pipeline. Within this corridor, a 125-foot-wide total easement would comprise temporary construction areas and extra work spaces. Approximately 50 feet of the total easement would be permanently maintained. If there are Project-related facilities outside of the corridor (such as access roads) that would be modified, their locations would also be part of the direct effects APE.

In West Virginia, an indirect APE was developed based on the historic context developed for the Project, the distribution of previously recorded historic resources, and a viewshed analysis of aboveground Project components. The indirect APE was determined in consultation with the West Virginia Division of Culture History (WVDCH), who is the West Virginia SHPO, as 0.4 kilometer (0.25 mile) on either side of the

proposed pipe centerline and a 0.8-kilometer (0.5-mile) radius around the limits of ground disturbance for each compressor station. In a letter dated May 8, 2015, WVDCH concurred with proposed Area of Potential Effects for Indirect Effects.

The indirect effects APE in Virginia was based on elevation analysis that took into account topography and current land use around the pipeline. This model did not factor in existing vegetation. The APE, at a minimum, was defined as a 450-foot-wide corridor centered on the pipeline centerline (225 feet on either side). In areas of higher elevation, the APE for indirect effects was expanded up to one mile on either side of the pipeline, resulting in an undulating Project APE. In general, the APE was narrower in the eastern counties and wider, in response to topography, in the westernmost counties of the Project route in Virginia. In a letter dated May 20, 2015, VDHR found that the Area of Potential Effects for Indirect Effects “accurately reflects previous consultation” and concurred that “the Indirect APE is appropriately defined.”

The defined MVP Project APE provides both FERC and consulting parties with a basis for understanding the geographic extent of anticipated impacts of the proposed Project, which is necessary in order to determine whether the Project may adversely affect historic properties.

MVP crosses the Appalachian National Scenic Trail (ANST) along the West Virginia-Virginia state line at approximate MP 196.3 at a location where the trail runs along Peters Mountain between Flat Ridge and Mystery Ridge. Tetra Tech on behalf of MVP, performed a VIA which assessed the potential visual impacts of the Project using the visual inventory and assessment methodology developed by the USFS. This visual analysis completed for the ANST examined visual effects well beyond the indirect effects APE.

MVP continues to consult with the USFS with regards to the potential impacts, effects assessment, and mitigation strategies for the Appalachian Trail Historic District and any resources on lands under USFS jurisdiction.

Mountain Valley Pipeline looks forward to continuing to work with NPS moving forward. Please feel free to contact me if you have questions or need any additional information. Thank you for your time and consideration.

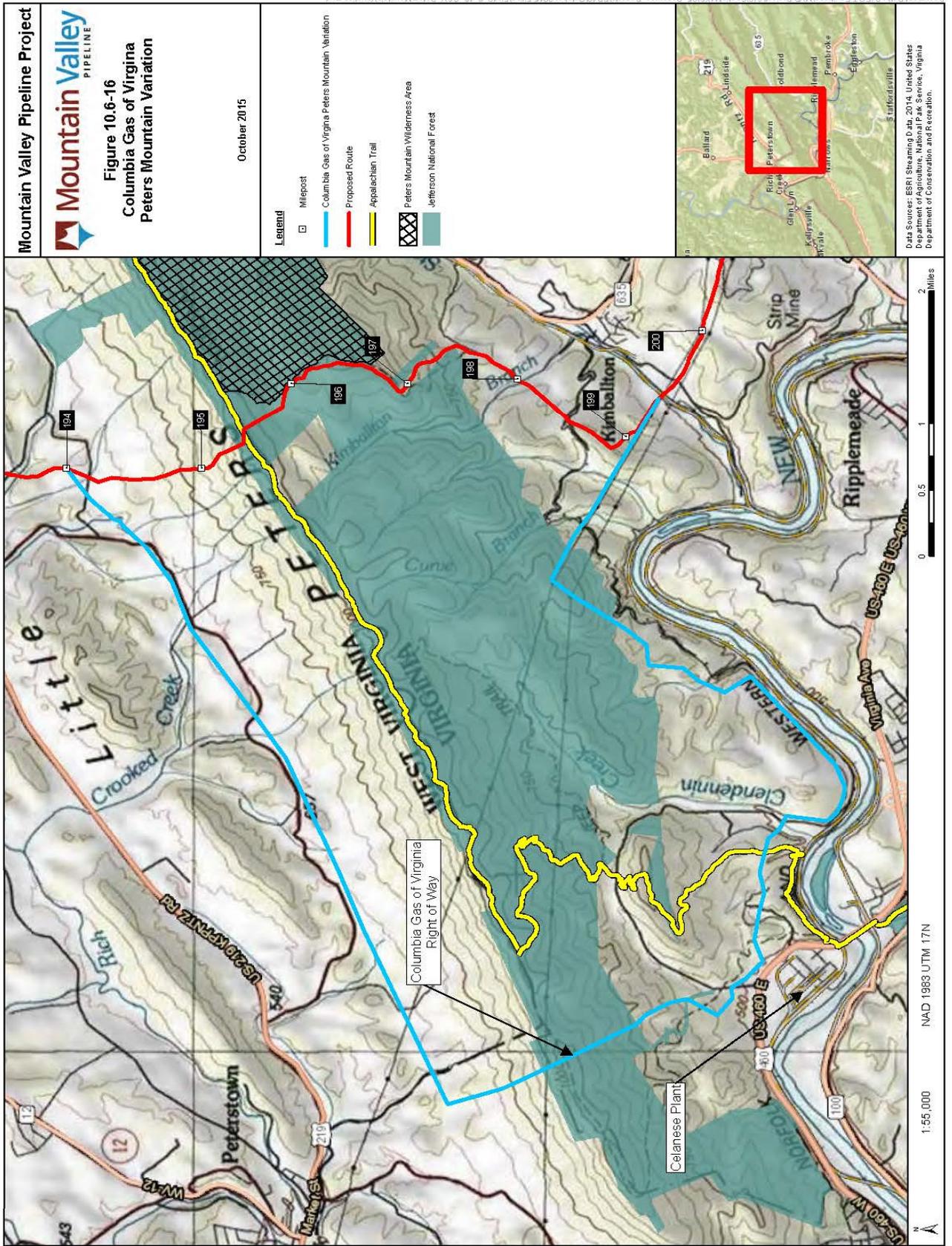
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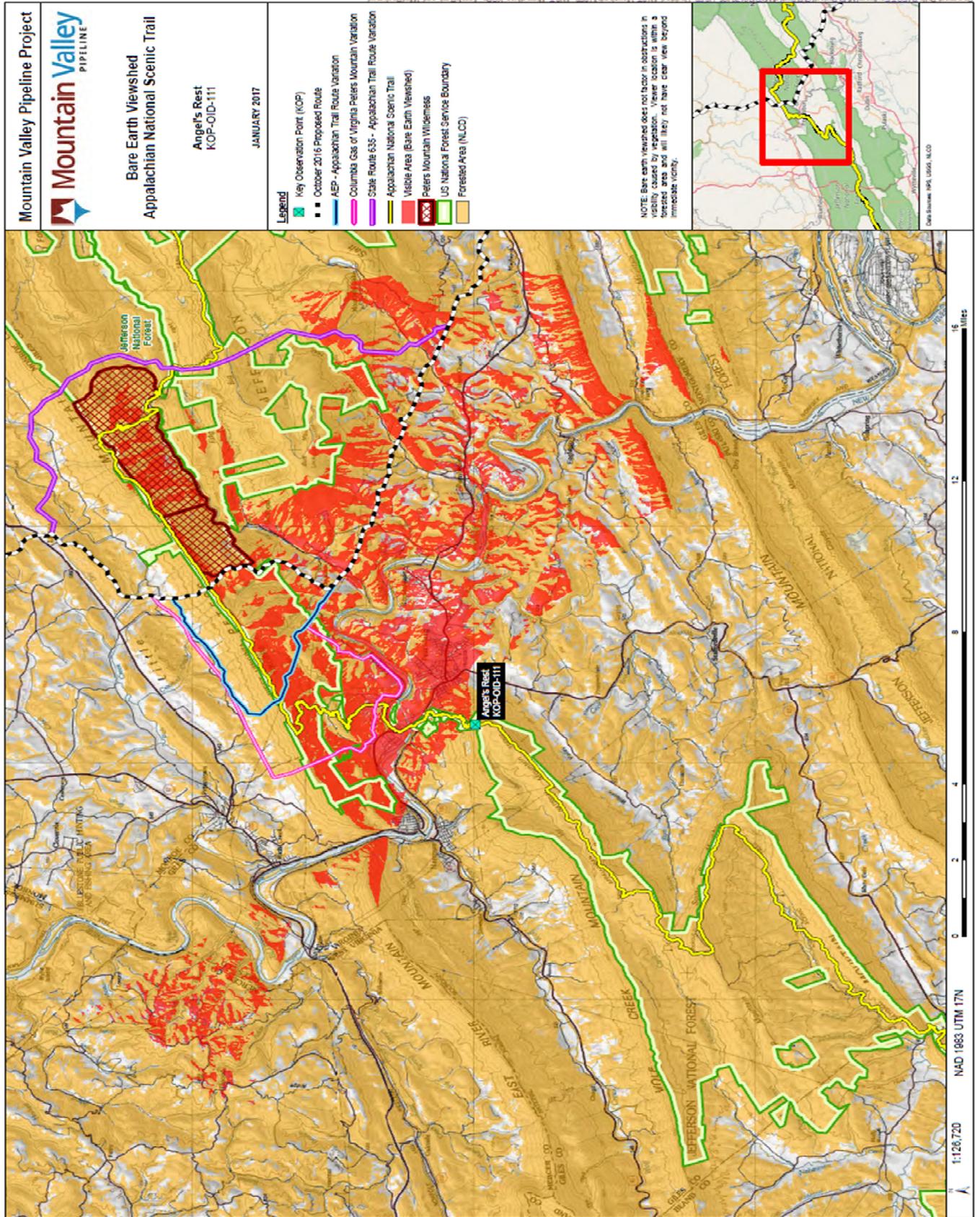
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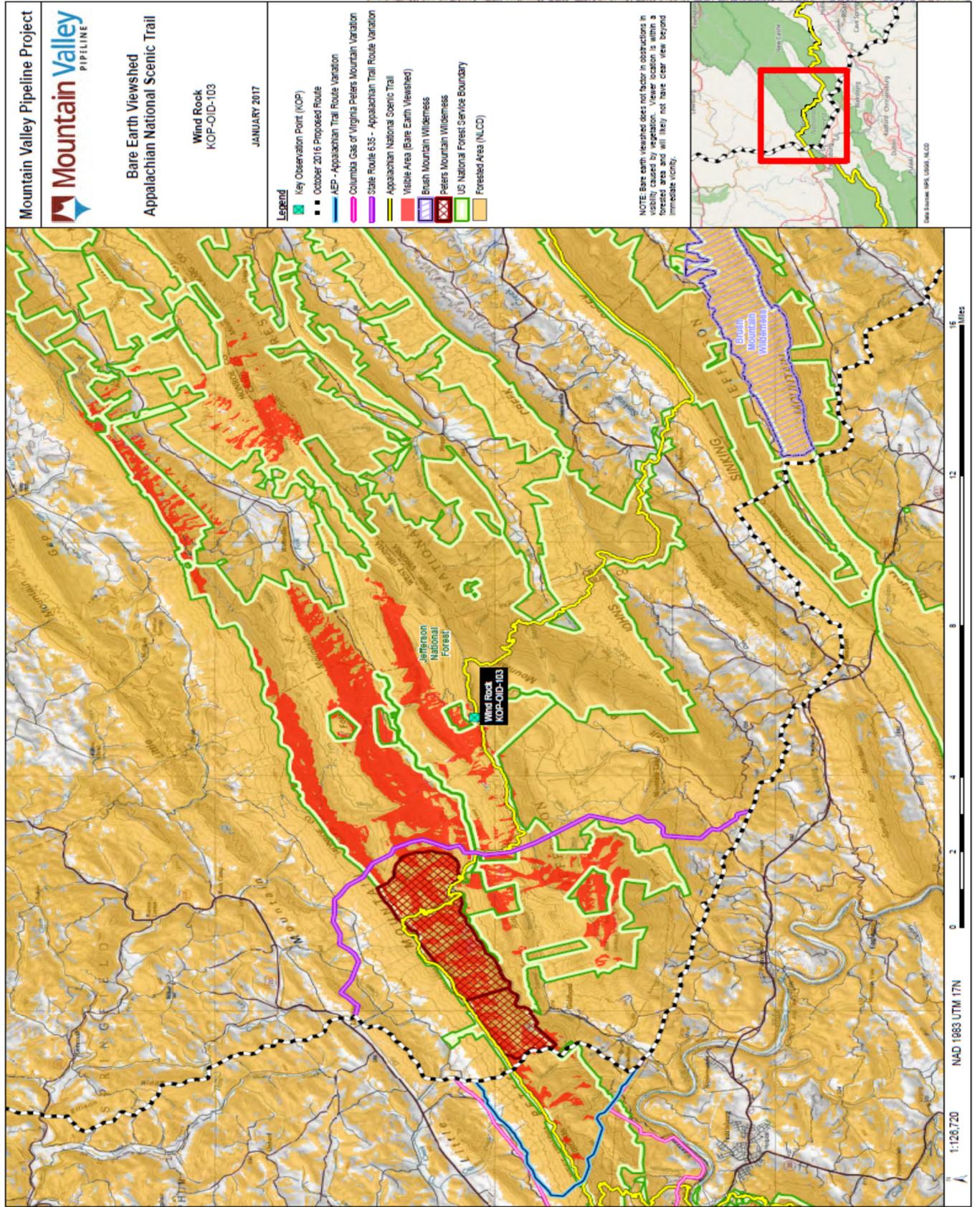
Attachment 1



Attachment 2



Attachment 3



Attachment 4

