

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:

OEP/DG2E/G3

Mountain Valley Pipeline LLC

CP16-10-000

§ 375.308(x)

January 26, 2017

Matthew Eggerding, Counsel
Mountain Valley Pipeline LLC
625 Liberty Ave., Suite 1700
Pittsburgh, PA 15222

Re: Post-DEIS Environmental Information Request

Dear Mr. Eggerding:

Please provide the information described in the enclosure, including comments from other federal and state cooperating agencies, to assist in our analysis of the above-reference certificate application. File your response in accordance with the provisions of the Commission's Rules of Practice and Procedure. In particular, 18 CFR 385.2010 (Rule 2010) requires that you serve a copy of the response to each person whose name appears on the official service list for this proceeding.

You should file a complete response within 20 days of the date of this letter. The response must be filed with the Secretary of the Commission at:

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

If certain information cannot be provided within this time frame, please indicate which items will be delayed and provide a projected filing date. **You should be aware that the information described in the enclosure is necessary for us to complete preparation of the environmental impact statement (EIS) for the Mountain Valley Project (MVP). Once we have received your responses and reviewed them for completeness, we will establish a revised schedule for completing the EIS.**

When filing documents and maps, be sure to prepare separate volumes, as outlined on the Commission's website at <http://www.ferc.gov/resources/guides/filing-guide/file-ceii/ceii-guidelines.asp>. Any Critical Energy Infrastructure Information should be filed as non-public and labeled "Contains Critical Energy Infrastructure Information-Do Not Release" (18 CFR 388.112). Cultural resources material containing location, character, or ownership information should be marked "Contains Privileged Information - Do Not

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Release” and should be filed separately from the remaining information, which should be marked “Public.”

File all responses under oath (18 CFR 385.2005) by an authorized Mountain Valley Pipeline LLC representative and include the name, position, and telephone number of the responder to each item.

For all materials submitted, provide one hard copy to the FERC’s Environmental Project Manager, and provide electronic copies directly to our third-party environmental contractor, Cardno (one each to Lavinia DiSanto and Doug Mooneyhan).

Thank you for your cooperation. If you have any questions, please contact me at 202-502-8059 or paul.friedman@ferc.gov.

Sincerely,

Paul Friedman
Environmental Project Manager
Office of Energy Projects

Enclosure

cc: Public File, Docket No. CP16-10-000

Enclosure

Mountain Valley Pipeline LLC (Mountain Valley)
Mountain Valley Pipeline Project (MVP)
Docket No. CP16-10-000

ENVIRONMENTAL INFORMATION REQUEST
Post-Draft Environmental Impact Statement (EIS)

General Project Description

1. On June 24, 2016, Mountain Valley filed its Plan of Development (POD) for crossing federal lands. In some cases, mitigation plans included in the POD were specific to federal lands. Does Mountain Valley intend to expand those plans to apply to the entire project area, including state, municipal, and privately-owned lands along the proposed pipeline route? If not, please provide a justification. The specific plans that should be expanded to cover the entire project area include:
 - a. Environmental Compliance Management Plan;
 - b. Restoration Plan;
 - c. Stormwater Pollution Prevention Plan;
 - d. Plant and Wildlife Conservation Measures Plan;
 - e. Hazardous Materials Management Plan;
 - f. Construction Emergency Preparedness and Response Plan;
 - g. Operation, Maintenance, and Emergency Response Plan;
 - h. Framework Flagging, Fencing, and Signage Plan; and
 - i. Off-Highway Vehicle Management Plan.
2. Document that Mountain Valley has submitted an updated SF-299 Right-of-Way Application to the U.S. Department of the Interior Bureau of Land Management (BLM) that *covers the current pipeline route* across federal lands.
3. Address the issues raised in the following letters filed with the FERC during the draft environmental impact statement (EIS) comment period:
 - a. Accession number 20161107-0096 (U.S. Army Corps of Engineers [COE]);
 - b. Accession numbers 20161215-5124, 20161221-5281, 20161221-5281, and 20161223-5049 (BLM, U.S. Forest Service [FS], U.S. Geological Survey [USGS]);
 - c. Accession number 20161222-5394 (Commonwealth of Virginia);
 - d. Accession number 20161229-0033 (U.S. Environmental Protection Agency [EPA]);

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- e. Accession number 20160907-5211 and 20161028-5031 (re: emergency response services);
 - f. Accession number 20161222-5458 (Mr. Rubin's report);
 - g. Accession number 20161222-5459 (Roanoke County Hydrogeological Assessment);
 - h. Accession number 20161219-5056 (Johnson);
 - i. Accession number 20161222-5062 (Vance);
 - j. Accession number 20161222-5403 (Yellow Finch Lane);
 - k. Accession number 20161223-5090 (Four Corners Farm – re: shifting of alignment for Little Creek crossing);
 - l. Accession number 20161026-5020 (Bouldin); and
 - m. Accession numbers 20161222-5041 and 20161222-5118 (Besa).
4. Address the comments provided by the following individuals during the FERC public sessions for the draft EIS:
 - a. November 2, 2016 – Rocky Mount, VA: Ginger Smithers; and
 - b. November 3, 2016 – Roanoke, VA: Martin Morrison.
 5. Based on Mountain Valley's October 14, 2016 filing with the FERC, identify any new yards or access roads that would be necessary to accommodate the proposed route changes. For each new yard indicate in tabular format the milepost (MP), county/state, acres, vegetation, current land use, and data on environmental resources (waterbodies, wetlands, special status species, cultural resources, etc.) derived from surveys. For any new access roads present similar data, and indicate if it would be a temporary or permanent road.
 6. File the results of environmental surveys for all pipeline route changes filed with the FERC by Mountain Valley on October 14, 2016, unless the route modification falls within the previous environmental survey corridor, or the data was previously provided in the public docket.
 7. While the draft EIS recommended that prior to construction Mountain Valley should provide the results of all environmental surveys for areas that would be affected by cathodic protection, we are now requesting that these data be provided in response to this environmental information request (EIR).

Water Resources

1. Clarify whether or not the October 2016 revised proposed pipeline route would cross any state-designated aquifers. If so, provide their MP locations, and outline measures that would avoid, minimize, or mitigation project impacts on those aquifer resources.
2. Provide a table of septic systems within 150 feet of construction workspaces (by MP/county/state). Explain how Mountain Valley would avoid, minimize, or mitigate impacts from construction activities in close vicinity to existing septic systems.
3. While the draft EIS recommended that prior to construction Mountain Valley should provide the location of all water wells, springs, and swallets within 150 feet of construction workspaces (500 feet in karst), we are now requesting that these data be provided in response to this EIR. Revise table 4.3.1-2 of the draft EIS based on survey data conducted to date along the currently proposed pipeline route. For areas that have not been surveyed, use publically available sources such as the West Virginia Geological and Economic Survey's 1986 publication, the Springs of West Virginia. Volume V-6A 1986 (associated geographic information system [GIS] data are available at West Virginia GIS Technical Center), and Mercer, Monroe, and Summers Counties by David B. Reger, Assistant Geologist, West Virginia Geological Survey 1926. Provide a site-specific justification for any missing drinking water sources.
4. Provide by MP potential well yield ranges for the aquifers that would be crossed by the currently proposed pipeline route in West Virginia; based on publically available data, such as in the Ground-Water Hydrology of the Upper New River Basin, West Virginia (compiled by R.A. Shultz, U.S. Geological Survey 1984).
5. In response to stakeholder comments, revise the *Water Resources Identification and Testing Plan* to include more details on the mechanism for determining compensation if a landowner's water source is impacted during construction and/or operation of the MVP.
6. Table 4.3.1-2 (Springs and Swallets Identified within 500 feet of the Mountain Valley Project Construction Work Area – updated October 2016) shows an unnamed spring located within the bounds of proposed access road MVP-SU198 at MP 161.3. Describe impacts that may occur to the spring as a result of the use and modifications to the access road, and the use of the additional temporary workspace at the confluence of MVP-SU198 and the pipeline right-of-way. Discuss the potential for alternatives that would avoid or reduce impacts on the spring (e.g., the use of access road MVP-SU199 instead of MVP-SU198).

7. There are inconsistencies between revised table 4.3.1-2 and Appendix L (Karst Features Identified within 0.25 mile of the Mountain Valley Project – updated October 2016). For example, Appendix L shows springs within 0.25 mile of construction workspace at MP 192.0 and MP 202.7, but these are not shown in table 4.3.1-2. Update table 4.3.1-2 and Appendix L, as needed, to reflect all known springs and swallets within 500 feet of MVP construction workspaces.
8. Provide additional information about the Lafayette Church Property identified in table 4.3.1-3 as a site with potential for contaminated groundwater within 200 feet of the MVP pipeline, including the source of potential contamination, the pollutants of concern, the date on which the case was closed, and the circumstances that facilitated the closure (e.g., permit compliance, successful cleanup, etc.).
9. The number of waterbodies that would be crossed by the MVP in table 4.3.2-2 (Number of Waterbody Crossings for the Mountain Valley Project and the Equitrans Project – updated October 2016) does not match the number of waterbody crossings in Appendix F-1 (Waterbodies Crossed by the MVP - updated October 2016). For example, table 4.3.2-2 shows that 781 minor waterbody crossings would be required, but Appendix F-1 shows 899. Revise the tables to show the correct number of waterbody crossings, by flow type and FERC size classification.
10. List the waterbody crossings, by MP/county, for which the West Virginia Department of Environmental Quality (WVDEQ) would require consultations under its Natural Streams Preservation Act, as indicated in table 1.5-1 (Major Environmental Permits, Licenses, Approvals, and Consultations Applicable to the Proposed Projects – updated October 2016). Provide anticipated dates for the start and completion of these consultations. In addition, provide the anticipated submittal date to the WVDEQ of a Section 402 Clean Water Act National Pollution Discharge Elimination System Hydrostatic Test Discharge Permit application.
11. Resolve the following apparent discrepancies between the table 4.3.2-8 (Waterbodies Crossed by the Mountain Valley Project in Areas of Shallow Bedrock – updated October 2016) and revised Appendix F-1:
 - a. Appendix F-1 shows that waterbody S-A5a (UNT to Fallen Timber Run) would be crossed at MP 2.3, while table 4.3.2-8 shows the crossing at MP 2.2;
 - b. Table 4.3.2-8 shows crossings of Right Fork Holly Creek and Barbecue Run, while Appendix F-1 only shows crossings of unnamed tributaries of these waterbodies; and
 - c. Table F-1 shows several crossings of waterbodies that are presumably in areas of shallow bedrock based on the locations at which they would be

crossed (e.g., Crooked Run [MP 63.0] and Little Knawl Creek [MP 70.0], Elliott Run [MP 74.8], Little Kanawha River [MP 74.8]), but they are not included in table 4.3.2-8.

12. There are several inconsistencies between information provided in table 4.3.2-11 (Proposed Waterbody Crossings in the Jefferson National Forest for the Mountain Valley Project - updated October 2016) and revised Appendix F-1. For example Appendix F-1 shows that UNT to Clendennin Creek would be crossed at MP 199.8, while table 4.3.2-11 shows the crossing at 197.8. Update the tables to reflect the correct waterbody IDs, number of crossings, and crossing locations.
13. For the revised Vertical Scour and Lateral Channel Erosion Analyses (filed October 14, 2016), provide the following information:
 - a. The channel slope value that was used to estimate a D50 value at each proposed intermediate waterbody crossing. In addition, provide the distance upstream and downstream that was used to determine the channel slope value at each crossing;
 - b. Additional details of the analysis performed to determine bedrock depths at the intermediate waterbody crossings. Specify the data inputs and sources used in a step-by-step manner (i.e. a flow chart);
 - c. Specify the exact methods and timing of how bedrock depths would be verified during construction, the approval flow to determine the depth of cover, and how this information would be reported to FERC;
 - d. Should Mountain Valley use an armoring layer at a waterbody crossing to mitigate for potential scour, provide the depth to which the armoring layer would be installed as well as distances up and downstream of the pipeline crossing;
 - e. In Appendix A, the proposed pipeline burial depth for the crossing of UNT to Bottom Creek at MP 240.8 is 1.7 feet. Indicate how MVP determined that this depth of cover complies with 49 CFR 192.327. Revise Appendix A, as appropriate, to reflect the correct pipeline burial depth; and
 - f. In Appendix A, the proposed pipeline burial depth is listed as, “3 (4 if Navigable Waterbody) for several waterbodies that are not identified in project documentation as being navigable waters under Section 10 of the Rivers and Harbors Act or as having been ‘studied for Section 10 status but official determinations have not yet been made.’ Clarify these apparent discrepancies.
14. Provide the location for crossings by the proposed pipeline (by MP/county/state) of all first-order streams. Explain the measures that Mountain Valley would implement to avoid, minimize, or mitigate project impacts at these stream crossing locations.

15. For table 4.3.2-12 (Mountain Valley Pipeline Locations Paralleling Waterbodies within 15 Feet – updated October 2016), address the following comments:
 - a. Confirm whether or not route surveys were done along the proposed waterbody crossing MP 245.4 (UNT to Mill Creek). If surveys are complete, revise the site-specific justification to reflect the survey findings; and
 - b. The proposed project route parallels waterbody S-L35 (Riley Branch) near MP 124.8, but this is not reported in table 4.3.2-12. Clarify this apparent discrepancy.
16. Table 4.1.1-9 (Flood Zone and Class of Pipe Crossed by the Mountain Valley Project – updated October 2016) shows a crossing of Rocky Creek at MP 287.2. However, Appendix F-1 does not include a crossing of Rocky Creek (only unnamed tributaries of Rocky Creek are listed). Clarify the apparent discrepancy.
17. Address the following apparent discrepancies between the revised Appendix F-1 and the October 2016 alignment sheets:
 - a. The waterbody crossed at MP 1.3 is named S-J66 (unnamed tributary [UNT] to North Fork Fishing Creek) in Appendix F-1 but appears as both S-J66 and S-A4 in the revised alignment sheets (see Attachment C_01_MVP Wetzel County Alignment Sheets-1 and Attachment C_01_MVP Access Road Detail Sheets_Aerial-1, respectively); and
 - b. Appendix F-1 shows waterbody S-L35 as being crossed one time for a total of 4.2 feet. However, the October 2016 alignment sheets depict several crossings of this waterbody, which would presumably result in a greater total crossing length.
18. There are inconsistencies between revised Appendix F-1 and the Open Water land use impacts shown in table 4.8.1-1 (Land Use Types Affected by Construction and Operation of the Mountain Valley Project and the Equitrans Expansion Project – updated October 2016). For example, table 4.8.1-1 shows there would be 0.0 acre of construction impacts to Open Water due to access roads, while Appendix F-1 shows there would be 0.7 acres of temporary impacts to waterbodies due to access roads. Clarify this apparent discrepancy, and update the table(s) to reflect accurate acreages of impacts to waterbodies.
19. Revise Appendix F tables to provide the length of pipeline crossing for all waterbodies. Provide a site-specific reason for any missing information.
20. Since the draft EIS was issued, Mountain Valley revised Appendix F to indicate that temporary fill would be used in waterbodies. Provide site-specific plans, including details regarding materials to be used and installation and removal methods for the use of temporary fill in waterbodies. Include a detailed analysis

of all reasonable alternatives to the use of temporary fill in waterbodies. Indicate if a modification to the permit application with the COE is needed.

21. In response to comments on the draft EIS, provide a discussion of flash floods in the project area during the Summer of 2016. Identify by MP/county/state areas along the currently proposed pipeline route that may be susceptible to flash flooding in the case of heavy rainfall events. Outline measures that Mountain Valley would implement to avoid, minimize, or mitigate impacts from flash floods; especially in areas of steep slopes during construction.
22. In response to comments received on the draft EIS, clearly identify each inter-basin transfer of water that may or would occur associated with the withdrawal and discharge of hydrostatic test water. Describe potential impacts on aquatic resources resulting from the inter-basin transfer of water. Outline measures that Mountain Valley would implement during hydrostatic testing to avoid, minimize, or mitigate such impacts. Provide the status of any required agency coordination and permitting for hydrostatic testing not previously documented in this docket.
23. As previously requested by the COE, provide site-specific details regarding the three open-cut wet waterbody crossings (Gauley River, Elk River, and Greenbrier River). Include details regarding specific equipment to be used, placement of the equipment (on the waterbody bank or inside the waterbody), construction methods, blasting, possible use of a temporary instream work platform (such as temporary placement of riprap), disposition of spoil (stored within or relayed to outside the waterbody), seasonal timing, expected duration of instream construction, measures used to minimize mobilization of sediment and turbidity to areas downstream of the work area, and details regarding methods to return the waterbody to pre-construction elevations.
24. As previously requested by the COE, provide additional information regarding the extent and characteristics of streams and wetlands at the site located at 37.673207 Latitude, -80.729775 Longitude.
25. Provide the anticipated submittal date for updated COE permit applications.
26. Provide the sedimentation analysis requested by the FS in its letter dated December 20, 2016.

Wetlands

1. Table 4.3.3-2 currently shows that there are no operational (permanent) impacts to wetlands by access roads, which is inconsistent with the 0.8 acres of permanent wetland impacts by access roads currently indicated in Appendix G-1. Resolve the apparent discrepancy and update tables accordingly.

2. Clarify the following on Appendix G-1:
 - a. Footnote #6 refers only to PEM wetlands being temporarily impacted, which is not consistent with what is indicated within that column (for example, W-A20-PFO with 0.0187 acres of construction impact only);
 - b. Footnote #7 refers only to PSS and PFO wetlands being permanently impacted and permanent impacts being only due to conversion, which is not consistent with what is indicated within that column (for example, PEM wetland W-A1a has 0.0003 acres of operational impact within the permanent pipeline right-of-way).
 - c. Footnote #6 on Appendix G-1 states that construction impacts include those within the permanent right-of-way; there are several instances where operational impacts are larger than construction impacts, which should not be the case if construction impacts include the permanent right-of-way as indicated by the footnotes (for example, W-A27-PEM – should be 0.0497 acres of PEM wetland impacts during construction, 0.0337 acres of which would be permanently impacted during pipeline operation; therefore, the 0.0337 acres of operation impact in the permanent pipeline right-of-way should be included as a construction impact as well; another example, W-K25 – should be 0.055 acres of PEM wetland impacts during construction, 0.0312 acres of which would be permanently impacted during pipeline operation; therefore, the 0.0312 acres of operation impact in the permanent pipeline right-of-way should be included as a construction impact as well). Revise the table to present “Construction Impacts” as combined construction and operational impacts.
 - d. Define ‘span’ as a crossing method in Appendix G-1.
3. Footnote ‘c’ on table 4.3.3-2 states that “construction impacts include those within the operational footprint,” inconsistent as in Table G-1 as outlined in the above comment #3(c).
4. There is an apparent discrepancy between table 4.4.2-1 and table 4.3.3-2. Understanding that wetland numbers in table 4.4.2-1 are derived from a database, there still seems to be a large disparity between the stated 42.4 acres of wetland construction impacts and 14.3 acres of wetland operational impacts, which includes the 0.8 acres of operational impacts from access roads, and table 4.3.3-2 which states 24.41 acres of wetland construction impacts and 12.14 acres of wetland operational impacts, which does not include the 0.8 acres of operational impacts from access roads. Resolve the apparent discrepancy or provide an explanation for the discrepancy.
5. Provide information concerning hydrological resources requested by the FS in its letter dated December 20, 2016.

Fisheries

1. While the draft EIS recommended that prior to construction Mountain Valley should provide the results of quantitative modeling for turbidity and sedimentation associated with wet open-cut crossings of the Elk River, Gauley River, and Greenbrier River, in response to comments, including from the EPA, Mountain Valley should now provide the analyses in response to this EIR. The analysis should include the duration, extent, and magnitude of turbidity levels and assess the potential impacts on resident biota. In addition, assess whether a dry open-cut crossings would be feasible at the Elk, Gauley, and Greenbrier Rivers, including the possible use of coffer dams to allow construction on one-half of the waterbody crossing at a time.
2. In response to comments on the draft EIS (see accession number 20161222-5487), would Mountain Valley agree to pursue natural streambank restoration in Virginia in coordination with VDGIF and VDEQ similar to Mountain Valley's existing commitment for such restoration in West Virginia in coordination with WVDEQ? Further, indicate whether Mountain Valley would be willing to implement the subject seasonal restrictions upon hydrostatic test water discharges into the two designated trout streams.

Vegetation

1. Provide a list of commercially gathered (non-timber) forest products, such as ginseng and mushrooms, and other plants used for local medicinal purposes in the project area, as mentioned by Mary Scott in her December 20, 2016 letter to the FERC (accession number 20161220-5024), and identify the locations of these plants along the MVP pipeline route (by MP). Indicate the measures that Mountain Valley would implement to avoid, reduce, or mitigate impacts to these plants.
2. In response to comments on the draft EIS, suggesting that two years of monitoring for invasive species would not be sufficient, indicate whether Mountain Valley would agree to increase the duration of invasive plant species monitoring within the maintained right-of-way and temporary workspaces after initiation of service.
3. Provide the results of surveys (or a schedule for filing reports) for the following rare plants in Virginia as requested by the Virginia Department of Conservation and Recreation (VADCR):
 - Chestnut lip fern (Ellison Quad):
 - Piedmont fameflower (Boone's Mill Quad); and
 - Weak bluegrass and Prairie dropseed (Penhook Quad).

4. A number of commentors, including the Commonwealth of Virginia, requested mitigation for direct, indirect, fragmentation, and edge effects resulting from forest clearing. Discuss measures that Mountain Valley could adopt that would minimize or mitigate for forest impacts.
5. Provide the protocol Mountain Valley would follow in circumstances where unforeseen additional tree clearing during construction may be required between April 1 and July 31.

Wildlife

1. Attachment A of Mountain Valley's October 27, 2016 filing states that tree clearing during the migratory bird nesting season may apply to areas in addition to those identified in the draft EIS (e.g., between MPs 23.2 and 25.9, MPs 71.3 and 73.4, MPs 108.3 and 115.6, and MPs 297.0 and 301.0). However, the updated Migratory Bird Conservation Plan filed on October 20, 2016 indicates that tree clearing during the migratory bird nesting season may be limited to the single area between MP 103.4 and 104.4. Resolve the apparent discrepancy and identify the specific areas Mountain Valley intends to clear trees within the migratory bird nesting season. Also provide a detailed explanation and rationale, beyond citing schedule requirements, for why tree clearing in these areas cannot be conducted outside of the migratory bird nesting season. Revise the Migratory Bird Conservation Plan, as necessary, to address comments from EPA and Virginia Department of Environmental Quality (see accession numbers (20161221-5087 and 20161222-5394).

Threatened and Endangered and Special Status Species

1. File a public version of the Biological Evaluation for the Jefferson National Forest (JNF). Include an updated discussion, and any correspondence with the FS not previously filed, outlining the location and mitigation measures proposed for the population of Rock Skullcap identified during plant surveys in the JNF.
2. Provide an assessment as to whether Locally Rare Species and Management Indicator Species would be expected to increase, decrease, or be unaffected by the MVP, based on anticipated changes to habitat resulting from the project.
3. Provide information regarding the effects of the MVP on little brown bats and tri-colored bats, and document communications with the Virginia Department of Game and Inland Fisheries (VDGIF) about impacts on those species and the development of measures to avoid, reduce, or mitigate those impacts.
4. File any outstanding 2016/2017 species survey reports, including, but not limited to, survey reports for bog turtles, bald and golden eagles, and Ellett Valley millipedes in the vicinity of the MVP. Document communications with the

VDGIF and the U.S. Fish and Wildlife Service (FWS) regarding those surveys, and file the agencies review of the reports.

5. In response to comments on the draft DEIS, indicate whether the MVP would affect the candy darter or diamond darter. Outline measures that Mountain Valley would implement to avoid, minimize, or mitigate impacts on those species. File copies of communications with applicable resource agencies regarding impacts on those species, not previously documented in the docket.
6. Document that informal consultations have been completed between Mountain Valley and the FWS regarding threatened and endangered species. File copies of the FWS review of Mountain Valley's draft Biological Assessment, not previously placed into the public docket.

Cultural Resources

1. Refresh outreach with Indian tribes by documenting recent communications between Mountain Valley and tribes listed on table 4.10.4-2 in the draft EIS and recording their responses to the project. In particular, document conversations with the Tribal Historic Preservation Office of the Seneca Nation of New York, which indicated to the FERC staff that they would like to review copies of cultural resources reports.
2. Document that post-application (after October 2015) Mountain Valley contacted local governments, Certified Local Governments, and local historical or archaeological organizations in West Virginia as requested by the West Virginia State Historic Preservation Office (SHPO), and file copies of correspondence with those local governments and organizations not previously in the public record.
3. Update cultural resources data up to January 2017 in tabular format. This should include:
 - a. Miles of proposed pipeline route inventoried by Mountain Valley by county by the end of January 2017 for each county (and percent);
 - b. Number of shovel probes excavated by Mountain Valley's consultants in each county (positive/negative) during surveys (excluding site-specific evaluative testing);
 - c. Inventories completed by Mountain Valley by the end of January 2017 at all proposed ATWS, aboveground facilities, staging areas, yards, cathodic protection beds, and new or to-be-improved access roads (listed by county);
 - d. A list of all pipeline route segments, aboveground facilities, and ancillary work areas where inventories have not yet been completed (include an anticipated completion date);

- e. All archaeological sites identified by the end of January 2017 within the direct area of potential effect (APE – 150 feet from centerline), listed by county/state, site number, cultural type, recorder company, date of recordation, MP, distance (in feet) from centerline, and evaluation; and
 - f. All historic architectural sites identified by the end of January 2017 within the direct APE, listed by county/state, site number, cultural type, recorder company, date of recordation, MP, distance (in feet) from centerline, and evaluation.
4. Revise the “Master List of Identified Historic Resources,” filed on October 27, 2016, to include all sites recorded through January 2017, and add columns for 1) MP location; 2) distance (in feet) to the pipeline centerline; and 3) assessment of project effects.
 5. Clarify how many previously recorded (prior to the initiation of the FERC’s environment review of the MVP in October 2014) archaeological sites and historic architectural structures were relocated by Mountain Valley’s cultural resources consultants within the direct APE during surveys conducted between 2014 and 2017. Provide a list of all the previously recorded resources relocated by Mountain Valley’s consultants by MP, county/state, site number, cultural type, recorder and date of recordation, distance (in feet) from pipeline, and SHPO evaluation.
 6. Document that relevant cultural resources reports (for the appropriate counties) were sent by Mountain Valley to all entities that signed confidentiality agreements and requested copies of reports. In particular, document that reports were sent to the following local governments or historical organizations (including citation of the report sent, and date of submittal to each organization for each report):
 - a. Roanoke Valley Preservation Foundation; and
 - b. Roanoke County Board of Supervisors.
 7. Mountain Valley should provide Tunis McElwain and Maury Johnson, individuals who requested copies of cultural resources survey reports in letters dated December 1 and 5, 2016, with an opportunity to sign a confidentiality agreement. If they sign the agreement, document that Mountain Valley sent them copies of the cultural resources survey reports for Webster and Monroe Counties, West Virginia, respectively.
 8. File copies of reviews by the respective SHPOs of the following cultural resource investigation reports:
 - a. Espino et al. June 2016, Mountain Valley Pipeline Project, Phase II Archaeological Investigations, Sites 46DO94, 46HS100, 46HS101,

- 46HS104, 46HS109, 46HS125, and 46LE77, Doddridge, Harrison, and Lewis Counties, West Virginia;
- b. Clement et al. July 2016, Mountain Valley Pipeline Project, Phase II Archaeological Investigations, Site 46WB407, 46WB414, 46WB416, 46WB433, Webster County, West Virginia;
 - c. Espino et al. November 2016. Addendum I to Volume I, Cultural Resources Survey, Mountain Valley Pipeline Project, Wetzel, Harrison, Doddridge, and Lewis Counties, West Virginia;
 - d. Freedman et al. November 2016. Addendum I to Volume II, Cultural Resources Survey, Mountain Valley Pipeline Project, Braxton and Webster Counties, West Virginia;
 - e. Freedman et al. December 2016. Addendum I to Volume IV, Cultural Resources Survey, Mountain Valley Pipeline Project, Summers and Monroe Counties, West Virginia;
 - f. Reeve et al. November 2016. Mountain Valley Pipeline Project, Phase I Archaeological Investigations, Craig Creek to Brush Mountain Route Survey in Jefferson National Forest, Monroe County, West Virginia, and Giles County, Virginia;
 - g. Reeve et al, November 2016, Mountain Valley Pipeline Project, Phase I Archaeological Investigations in Blue Ridge Parkway, Roanoke and Franklin Counties, Virginia;
 - h. Reeve et al. November 2016. Mountain Valley Pipeline Project, Phase IB Archaeological Survey Report Addendum 2, and Phase II Archaeological Evaluation, Site 44PY0442, Pittsylvania County, Virginia;
 - i. Reeve et al. December 2016. Mountain Valley Pipeline Project, Phase IB Archaeological Survey Report Addendum 1, and Phase II Archaeological Evaluations, Sites 44CG0253, 44CG0254, 44GC0255, Craig County, Virginia;
 - j. Reeve et al. December 2016. Mountain Valley Pipeline Project, Phase IB Archaeological Survey Report Addendum 1, Franklin County, Virginia; and
 - k. Espino et al. January 2017. Addendum 1 to Volume III, Cultural Resources Survey, Mountain Valley Pipeline Project, Nicholas, Greenbrier, and Fayette Counties, West Virginia.
9. File the comments of the FS archaeologist on:
- a. The FS78 Variation route survey report (Reeve et al. September 2016), filed with the FERC on October 27, 2016, and submitted to the JNF on October 10, 2016;

- b. Craig Creek to Brush Mountain Route Survey in Jefferson National Forest, (Reeve et al. November 2016), and
 - c. The ARPA permit for Phase II testing of sites within the JNF submitted by Search on October 19, 2016 (copy of cover letter filed with the FERC on October 27, 2016). Also, provide the results of the testing, or a schedule for filing that report, together with reviews by the FS and SHPO.
10. File the comments of the National Park Service (NPS) on the Archaeological Investigation of the Blue Ridge Parkway Crossing (Reeve et al. August 2016).
 11. File the results of Phase II archaeological testing at unevaluated sites along the proposed MVP pipeline route, or a schedule for when the reports would be filed, including for site 46BX114 in Braxton County, sites 46NI1846 and 1847 in Nicholas County, sites 46GB493, 498, 499, 500, 503, 504, 505, and 536 in Greenbrier County, sites 46SU78, 147, 239, 717, 722, and 724 in Summers County, and sites 46ME281 283, 284, 285, and 307 in Monroe County, West Virginia, and sites 44GS226, 227, 229, 230, 231, 232, 235, 236, and 237 in Giles County, site 44RN383 in Roanoke County, and sites 44FR360, 363, 365, 366, 370, 373, and 376 in Franklin County, Virginia, and file the reviews of the reports by the SHPOs.
 12. File the results of archival research or other Phase II evaluative investigations at historic architectural standing structures identified along the proposed MVP pipeline route in Virginia as recommended by Mountain Valley's consultants, or file plans to avoid those sites, or a schedule for submitting the research reports or avoidance plans, including for the Berean Baptist Church (35-34) and Warthen House (35-5106) and the proposed Big Stony Creek Rural Historic District (35-5127) in Giles County; Little Hope Primitive Baptist Church (80-580), Unnamed 1900 House (80-488), Elijah Henry House (80-5297) and the WDBJ Television-WSLQ Radio Transmitting Facility (8-5675) in Roanoke County; Norfolk & Southern Railroad (60-5170, 5171, and 5172) in Montgomery County; historic sites 33-5304, 33-5325, 33-5329, 33-5398, and 33-5400 in Franklin County, and file reviews of the reports or plans by the SHPO.
 13. File plans to avoid the Sam's Run Historic District (starting at Site 188) in Wetzel County, the Wiseman Residence (Historic Site 4) in Summers County, and Tilley Farmstead (Historic Site 233) in Monroe County, West Virginia; and avoidance plans for sites 46SU725, 739, and 740 in Summers County, West Virginia, and file the SHPO's review of the plans.
 14. File Treatment Plans or Avoidance Plans for sites 46HS101 in Harrison County and 46LE77 in Lewis County, West Virginia, and the Road Trace at Adlai Jones Farm (35-412-466) in Giles County, and Flora Farm (33-389) in Franklin County, Virginia; and file the SHPOs' review of those plans.

15. Address the letter from Stephen and Anne Bernard dated September 14, 2016 (accession number 20160919-0013) regarding archaeological site 44FR191. This site was not listed in Appendix 4F of Mountain Valley's application to the FERC and was not described in the Phase 1B archaeological survey of Franklin County, Virginia (Reeve, et al., September 2015). Explain in what filings with the FERC, Mountain Valley has documented that site 44FR191 is within the APE, has been evaluated for eligibility to the National Register of Historic Places (NRHP) with concurrence from the SHPO, document that a testing plan was presented for review, and if testing was conducted at this site file the results and SHPO review.
16. Address the letter from Alan O'Hara filed December 12, 2016 (accession number 20161207-0049). Mr. O'Hara claims there are archaeological sites on his land. Indicate if archaeological sites on Mr. O'Hara's land were identified by Mountain Valley's contractor, and provide the reference for where those sites were discussed in cultural resource survey reports previously filed with the FERC. If archaeological sites were not recorded on Mr. O'Hara's property, explain why.
17. Address the letter from Zane Lawhorn, filed December 20, 2016 (accession number 20161220-5062), with regards to an historic road on the Oak Hill Farm in Monroe County, West Virginia, which he claims would be crossed by the MVP pipeline route. Indicate if this historic road was identified by Mountain Valley's contractor, and provide the reference for where the site was discussed in cultural resource survey reports previously filed with the FERC. If this historic road was not recorded, explain why. Provide the distance (in feet) from the historic road to the boundaries of MVP work areas.
18. Address the letter from Maury Johnson, dated December 5, 2016 (accession number 20161205-5227), with regards to archaeological sites on his land in Monroe County, West Virginia. Indicate if archaeological sites on Mr. Johnson's land were identified by Mountain Valley's contractor, and provide the reference for where those sites were discussed in cultural resource survey reports previously filed with the FERC. If archaeological sites were not recorded on Mr. Johnson's property, explain why.
19. Address the letter from Dale Angle, dated December 16, 2016, with regards to archaeological sites on his land in Franklin County, Virginia. Indicate if archaeological sites on Mr. Angle's land were identified by Mountain Valley's contractor, and provide the reference for where those sites were discussed in cultural resource survey reports previously filed with the FERC. If archaeological sites were not recorded on Mr. Angle's property, explain why.

20. Landowners have mentioned that they reside in historic houses located in proximity to the pipeline. Indicate the distance (in feet) between the proposed pipeline and the following houses:
- a. House of Virginia McWharter at 497 Blue Grass Trail, Newport, Virginia built in 1875 (known as Willow Springs);
 - b. House of Mr. Berkley in Pence Springs, West Virginia, on Kenney's Knob, built in 1825;
 - c. House of Rebecca Dameron on Bent Mountain, built in 1865 (see letter filed November 22, 2016);
 - d. Samuel Gwinn Plantation at Old Brick Manor Farm, near Lowell, West Virginia, dating to 1868 (mentioned by David and Jeanne Schumauss in their November 17, 2016 letter);
 - e. Old home sites owned by Tunis McElwain in Webster County, West Virginia; and
 - f. House of Stephen Bernard, built in 1880, in Boone's Mill, Virginia.

Document if these historic houses were recorded and evaluated by Mountain Valley's cultural resources contractor, and provide the site number and report citation. If not recorded, explain why.

21. Address the Tom King report filed by Matthew Fellerhoff on August 30, 2016 (accession number 20160830-5133). In particular, provide details about the Coles-Terry Rural Historic District in Roanoke County, Virginia, and indicate the distance (in feet) between resources in the District and the pipeline. Provide an assessment of project effects for the Coles-Terry Rural Historic District, including on the rural historic landscape and built environment, and file the SHPO's review of that assessment.
22. Address the comments of the Greater Newport Rural Historic District Committee (GNRHDC) filed with the FERC on October 24, 2016 (accession number 20161024-5068). In particular, focus on table 1 of the GNRHDC letter, listing the resources, their evaluation, and distance in feet to the boundary of work spaces. Given that the October 14, 2016 filing with the FERC by Mountain Valley changed the proposed pipeline route within the Greater Newport Rural Historic District in Giles County, Virginia, provide a table that lists all cultural resources within the indirect APE (0.5 mile from the pipeline) in the Historic District, and their distance (in feet) from the edge of the construction right-of-way and the centerline of the newly proposed route. Also, address the comments of the GNRHDC on the draft EIS, filed December 21, 2016 (accession number 20161221-5365). Provide an assessment of project effects for the Greater Newport Rural Historic District, including on the rural historic landscape and built environment, and file the SHPO's review of that assessment.

23. Address the letter of Donald Wayne Jones dated December 19, 2016 (accession number 20161219-5105) concerning the Adlai Jones Farm in Giles County, Virginia, and provide a table that lists the historic sites mentioned in his letter, and the distance (in feet) to workspaces and centerline, for:
 - a. 1880s ditch;
 - b. Adlai Jones house purchased in 1923;
 - c. William Arkennedy Jones barn;
 - d. Adlai and Everett Jones house dating to 1926;
 - e. Uncle Bub Jones house;
 - f. Denny Jones corn crib;
 - g. Denny Jones house foundation;
 - h. John Jones rock wall fence;
 - i. Camper dwelling at Road Trace;
 - j. Camper dwelling at Billy Spring;
 - k. Slave quarters at Leffell farm;
 - l. Dude Smith dwelling; and
 - m. Fisher cemetery.
24. Address the J.D. Pezzoni report filed by the Water and Power Law Group on May 9, 2016 (accession number 20160509-5155) that requested a finding of project effects for specific resources within the Greater Newport Rural Historic District and the Newport Historic District in Giles County, Virginia. Using the revised pipeline route filed October 14, 2016, recalculate the distance (in feet) between the MVP pipeline and workspace area boundaries and the historic resources listed in the Pezzoni report.
25. Clarify the MP location and distance (in feet) of the revised proposed pipeline route filed October 14, 2016 to the exterior boundary of the Newport Historic District in Giles County, Virginia (from edge of the construction right-of-way and centerline). Illustrate the relationship of the pipeline to the Historic District boundary on a copy of a 7.5-minute USGS topographic quadrangle map. Document the distance, in feet, from workspaces to any resources in the indirect APE (0.5-mile from centerline) within the Newport Historic District. Provide an assessment of project effects for the Newport Historic District, including on the rural historic landscape and built environment, and file the SHPO's review of that assessment.
26. Given that the October 14, 2016 proposed route along the adopted Mount Tabor Sinkhole Plain Variation would change the crossing of the North Fork Valley

- Rural Historic District, in Montgomery County, Virginia, provide a table that lists all cultural resources within the indirect APE in the Historic District, and their distance (in feet) from the edge of workspaces and the centerline. Also, provide the MPs for the segment of pipeline route that would cross through the North Fork Valley Rural Historic District, and illustrate the relationship of the pipeline to the Historic District boundary and contributing elements of the Historic District in the indirect APE on a copy of a 7.5-minute USGS topographic quadrangle map. Provide an assessment of project effects for the North Fork Valley Rural Historic District, including on the rural historic landscape and built environment, and file the SHPO's review of that assessment.
27. Address the December 19, 2016 letter from Preserve Bent Mountain (accession number 20161220-5042) that requested a study of "cultural attachment" for the Bent Mountain and Poor Mountain communities in Roanoke County, Virginia. Also provide the results of additional research about the Bent Mountain Rural Historic District, as recommended by New South Associates (Turco, March 2016), and concurred with by the Virginia SHPO. Provide an assessment of project effects for the Bent Mountain Rural Historic District, including on the rural historic landscape and built environment, and file the SHPO's review of that assessment.
 28. Given that the October 14, 2016 filing with the FERC by Mountain Valley changed the proposed pipeline route between about MPs 246.1 and 246.6 within the Blue Ridge Parkway Historic District in Roanoke and Franklin Counties, Virginia, provide a table that lists all cultural resources within the indirect APE (0.5 mile from the pipeline) in the Historic District, and their distance (in feet) from the edge of the construction right-of-way and the centerline of the newly proposed route. Provide an assessment of project effects for the Blue Ridge Historic District, including on the rural historic landscape and built environment, and file the NPS review of that assessment.
 29. If a SHPO makes a finding of adverse effect for any Historic District, file a District-specific treatment plan, and the SHPO's review of the plan.
 30. Address the comments of Georgia Haverty filed with the FERC on November 10, 2016 (accession number 20161110-5022). Document whether or not the Doe Creek Farm (VADHR File No. 35-18) was recorded and evaluated as an historic site by Mountain Valley's cultural resources contractor. If so, provide the report citation. If not, explain why. Indicate the distance (in feet) from Site 35-18 to MVP work area boundaries.
 31. Revise Phase IB Archaeological Survey Report Addendum 1, and Phase II Archaeological Evaluations, Sites 44CG0253, 44CG0254, 44GC0255, Craig County, Virginia (Reeve et al., December 2016) to include:
 - a. Dates of the investigations;

- b. Site number and site form for the rock shelter;
 - c. Site forms for the historic architectural sites (022-5039; 022-5042, 022-5043, and 022-5044);
 - d. Avoidance plans for the rock shelter and the four historic architectural sites (022-5039; 022-5042, 022-5043, and 022-5044); and
 - e. Copies of 7-5-minute USGS topographic quadrangle maps that illustrate the location of: 1) all areas covered by cultural resources inventories; and 2) all cultural resources identified within the survey areas.
32. Revise Phase IB Archaeological Survey Report Addendum 1, Franklin County, Virginia (Reeve et al., December 2016) to include:
- a. Dates of the investigations;
 - b. Site numbers and site forms for the 12 historic architectural sites;
 - c. Avoidance plans for prehistoric sites 44FR387, 392, 394, and 407; and
 - d. Copies of 7-5-minute USGS topographic quadrangle maps that illustrate the location of: 1) all areas covered by cultural resources inventories; and 2) all cultural resources identified within the survey areas.
33. Revise Addendum 1 to Volume III, Cultural Resources Survey, Mountain Valley Pipeline Project, Nicholas, Greenbrier, and Fayette Counties, West Virginia (Espino et al. January 2017) to include:
- a. Dates of the investigations;
 - b. Areas surveyed, by MP, including length and acres;
 - c. Avoidance plan for cemetery in Nicholas County; and
 - d. Copies of 7-5-minute USGS topographic quadrangle maps that illustrate the location of: 1) all areas covered by cultural resources inventories; and 2) all cultural resources identified within the survey areas.

Geology

1. Address the letter filed with the FERC by Coronado Coal on November 14, 2016 (accession number 20161114-5272). In particular, document recent communications with Coronado Coal towards reaching an agreement to cross their coal reserves and compensate for impacts. Specify (by MPs/county/state) where the proposed pipeline route would cross the Pocahontas No. 6 & No 7 coal seams, and the acres of coal reserves that may be impacted by project construction and operation at those locations.

2. Several discrepancies were observed in table 4.1.1-14 (Summary of Shallow Bedrock along the Mountain Valley Project filed on October 20, 2016). Provide a revised table or clarify the following:
 - a. The totals presented for West Virginia, Virginia, and Project Total in table 4.1.1-14 do not match the sums of the column;
 - b. The totaled distance values for both county, state, and project total in Appendix M (Shallow Bedrock along the Mountain Valley Project) do not match the county, state, and project totals presented in table 4.1.1-14; and
 - c. According to the revised Vertical Scour and Lateral Channel Erosion Analysis (filed on October 14, 2016) it is estimated that shallow bedrock (bedrock within 7 feet of the ground surface) would occur at several waterbody locations. The crossing MPs identified in the scour analysis occur outside of the shallow depth to bedrock identified in Appendix M. Provide a revised table 4.1.1-14 and Appendix M that include potential shallow depth to bedrock as identified in the scour analysis.
3. Table 4.1.2-2 (Steep Slopes along the MVP Pipeline Route on the JNF) appears to have an error as the start MP 197.5 is greater than the end MP 197.4. Resolve this apparent discrepancy.
4. Provide updated crossing distances (miles/counties) for the Millboro Shale, Needmore Shale, and Ashe formation.
5. Provide an updated distance for the closest uranium deposit in proximity to the MVP.
6. Provide updated MPs for the area of the Giles County Seismic Zone where peak horizontal ground acceleration would be on the order of 0.14 force of gravity.
7. Provide updated MPs for the slopes identified to exceed the 1,580 feet length for triggered slope displacement hazards.
8. Address the issues raised by the Indian Creek Watershed Association on December 21, 2016 (accession number 20161221-5434) and the attached report entitled "Hydrogeological Assessment of the Proposed Mountain Valley Pipeline Routes Through Subwatersheds with Tributaries to Indian Creek, Monroe County, WV" by Pamela Dodds.
9. In response to comments on the draft EIS, provide a discussion of potential impacts due to the occurrence of a seismic event and landslide at the same time and place. Outline measures that Mountain Valley would implement to avoid, minimize, or mitigate impacts on steep slopes resulting from earthquakes and landslides.

10. Provide the cross section results of the electrical resistivity study and analysis conducted along the Mount Tabor Variation.
11. Mountain Valley indicated LIDAR data was not publically available for karst areas in proximity to the MVP. Provide an updated fracture trace analysis utilizing the publically available LIDAR data identified in public comments made by Mode Johnson (accession number 20161222-5305) and Pamela Ferrante (accession number 20161220-5368).
12. Provide the protocol Mountain Valley would follow in circumstances where unforeseen mine pools are encountered. File an unanticipated mine pool mitigation plan, and document its development in communication with applicable resource agencies.
13. File a final Blasting Plan. Document that the plan was developed in communications with applicable resource agencies.
14. Between MPs 196.9 and 197.4 the pipeline route descends steep slopes where National Forest System (NFS) lands are part of the temporary construction right-of-way. Revise table 4.1.2-2 from the draft EIS to include those steep slopes.
15. In response to the FS request dated December 20, 2016 for site-specific designs at high-hazard locations, Mountain Valley did not include data to show the effectiveness of its proposed measures. Document communications with the FS on this issue, and provide the requested information.

Soils

1. Updated Appendices N-1 and N-2 filed on October 20, 2016 have several instances of MPs with no Map Unit ID or soil name to accompany the entry (e.g., MP 65.4 has no soil name but impacts are listed). Clarify this apparent discrepancy and include an explanation that specifies why no map unit or soils series are identified for blank entries.
2. The total presented for stony/rocky soils (50.5 acres) in Appendix N-2 (Soils and Soil Limitation Crossed by the Mountain Valley Project in Virginia in Acres filed October 20, 2016) differs greatly from the summed value of that column (120 acres) resolve the apparent discrepancy.
3. The prime farmlands and stony/rocky soil columns in Appendix N-4 (Soils and Soils Limitations at the Mountain Valley Project Access Roads in Acres filed October 20, 2016) contains blank cells with no symbol stating no impact. Clarify these apparent discrepancies.
4. The total presented for shallow depth to water table (0 acres) in Appendix N-7 (Soils and Soil Limitations Crossed by the MVP Contractor Yards in Acres filed

October 20, 2016) does not match the summed value of that column (4.1 acres). Resolve the apparent discrepancy.

5. Multiple discrepancies exist between the values presented in table 4.2.1-1 (Soil Limitations along the Mountain Valley Project [in acres] filed October 20, 2016) and Appendices N-1 through N-8. Specifically errors were found between the totals reported in the tables for the following facilities and categories:
 - a. Pipeline Right-of-Way: prime farmland; compaction potential; water erosion potential; revegetation potential; poor drainage; and stony/rocky soils;
 - b. Compressor Stations: stony/rocky soils (temporary and permanent impacts);
 - c. Meter Stations: Compaction Potential (permanent impacts); and
 - d. Construction Yards: water erosion potential (temporary impacts).

Provide revised tables that resolve these apparent discrepancies.

6. See Table 4.2.1-1 in the draft EIS, page 4-56. Include a similar table in the JNF section 4.2.1.5.
7. See the draft EIS, page 4-64, Section 4.2.2. Provide a discussion of access roads to construction activities including effects to soil resources from construction and/or improvement of access roads, as occurs in other resource areas of the document.

Land Use, Transportation, Recreation, and Visual Resources

1. According to a filing with the FERC on October 14, 2016, Mountain Valley sent copies of its revised Traffic and Transportation Management Plan to various state and local government agencies via letters dated October 12, 2016. File copies of agency reviews of the revised plan, such as letters from the Virginia Department of Transportation, and Mountain Valley's responses to those comments.
2. In response to comments on the draft EIS (see accession number 20161222-5415), indicate whether Mountain Valley, when crossing railroads, would commit to adhering to applicable Federal Railroad Administration safety-related requirements, and other procedures requested by companies that own or operate the railroads or rights-of-way being crossed.
3. File an analysis of recreational use of the Gauley River in West Virginia, including for white-water rafting, such as the number of river users and season of use. Explain how Mountain Valley would reduce or mitigate impacts on recreational users of the Gauley River during its construction across the river at about MP 118.6.

4. Indicate if the MVP pipeline route would cross Lowell Road in the vicinity of MP 173 in Summers County, West Virginia. Determine if Lowell Road has been officially designated as a “West Virginia Backway,” as claimed by David and Jeanne Schmauss in their November 17, 2016 letter to the FERC (accession number 20161125-0016).
5. Utilizing the most correct route of the Appalachian National Scenic Trail (ANST, Forest Trail #1) is critical to visual analyses. Provide current ANST centerline data that is available from the Appalachian Trail Conservancy (ATC), which must be utilized to meet the FS criteria. Obtain FS approval on the data and any updated maps and figures before filing the data with FERC.
6. Address the letter from the ATC, filed December 8, 2016 (accession number 20161208-5043), and the letter from the FS filed December 12, 2016. In particular, provide updated visual impact analyses of the ANST, using both “leaf-on” and “leaf-off” simulations of the pipeline route at the crossing location, and from other Key Observation Points (KOP) at highly visited nearby locations along the ANST, including Angels Rest, Dragon Tooth, Kelly Knob, and “middle ground” and background views within the JNF.
7. Attachment A of Mountain Valley’s December 22, 2016 filing restates coordination with the ATC and local chapters that occurred before the release of the draft EIS and states that Mountain Valley provided information from July to the NPS in early December 2016. Document communications with the NPS, FS, ATC, and local clubs that occurred after the release of the draft EIS on September 16, 2016 regarding visual simulations and KOP related to the ANST, that are not already in the public record for this proceeding. Address:
 - a. The December 22, 2016 comments of the NPS (Accession No. 20161223-5049) that “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;”
 - b. The December 14, 2016 comments of the ATC (Accession No. 20161215-0009) that as of the date of that filing “no coordination with the ATC or local ATC clubs has occurred;” and
 - c. The December 20, 2016 comment of the Roanoke Appalachian Trail Club (Accession No. 20161220-5163) that “MVP has made no contact nor any attempt at coordination with RATC, and it would now be too late for any meaningful contact,” and that “The only visual impact photo supplied by FERC or the applicant is not even located at the proposed ANST crossing (because both locations we saw flagged were primarily in clearings), was

taken when the leaves were on, and makes no attempt to satisfy criteria provided by the USFS in the March 9, 2016 comments on the original MVP Resource Reports.”

8. Attachment B of Mountain Valley’s December 22, 2016 filing states that “Mountain Valley has consistently been conducting visual simulations at KOP’s defined by the Forest Service over months of coordination.” Indicate:
 - a. The dates of these visual simulations;
 - b. Whether the KOP were limited to those defined by the FS; and
 - c. The “dozens of points already reviewed” related to the ANST.
9. Per the letter dated December 12, 2016 from the FS, update the “seen area” analysis using the currently proposed pipeline route, and perform leaf-off surveys to field verify potential impacts on scenery (including but not limited to views of Sinking Creek and Brush Mountains from State Route 42 and residences along Craig Creek; and roads, trails and communities in valleys on either side of Peters Mountain). Mountain Valley should field verify travelways on NFS lands, including roads and trails, photographing the locations. The narrative analysis should discuss the lengths along those travelways, duration of view, and angle and aspect of view where the pipeline corridor would be visible along those travelways, in order to assess whether the JNF Scenic Integrity Objectives (SIO) would be met. Document communication with the FS and BLM before completion of the updated seen area analysis to ensure that meets agency requirements.
10. File an analysis of the locations and acres of the pipeline route visible on the JNF from the ANST where the Scenic Integrity Objective (SIO) would be changed from High or Moderate to a lower SIO as a result of proposed Plan Amendment 1 to reallocate 186 acres to prescription area 5C.
11. Address the letter dated December 19, 2016 from the Virginia Outdoors Foundation (VOF, accession number 20161219-5102). In particular, provide an analysis of project impacts from a proposed access road across VOF Parcel #102-00-01-02-0000; and a copy of a 7.5-minute USGS topographic quadrangle map showing the access road in relationship to the VOF parcel and Honeysuckle Road.
12. Acreage impacts from access roads provided in the updated land use impact tables filed on October 20, 2016 (DEIS table 2.3-1 and DEIS table 4.8.1-1) are not consistent with the total acreage impacts calculated from the updated access road table (DEIS Appendix E-1) also filed on October 20, 2016. Many of the access roads in the updated Appendix E-1 still contain “TBD” for information such as status, existing surface type, proposed modifications, and anticipated acres of improvements. Additionally, due to formatting or other reasons many of the

- updates provided in the updated Appendix E-1 are not visible. Provide an updated access road table with the missing information and provide revised tables for access roads and/or land use that consistently report the acreage impacts from access roads. For access roads that have not yet been surveyed, use a desktop analysis to estimate acreage impacts and potential need for upgrades. Ensure the table is formatted to show all updates.
13. Several tables from the October 2016 submittal included updated acreage numbers but had project total or subtotal rows or columns that were not updated. Ensure all tables contain updated subtotals and totals to reflect the new acreages impacted, including, but not limited to, tables: 2.3-1, 4.3.3-1, 4.4.2-1, and 4.8.1-1.
 14. Clarify the following issues with the residential site specific plans and table 8-C:
 - a. Drawing number RSS-H600-138 shows a structure labelled as a “House” within 44.6 feet of work space as well as three other structures but the drawing number is not listed in table 8-C. Update table 8-C to include a reference to this drawing number and these structures; and
 - b. Residential site specific plans are included for structures labelled “Building” in drawing numbers RSS-H600-030 and RSS-H600-085. Clarify whether these structures are residences.
 15. Provide a discussion of visual impacts associated with the crossings of the Lower Greenbrier River Byway (MP 171.3) and the Lowell Backway (MP 171.9). Include measures that would be implemented by Mountain Valley to avoid, minimize, or mitigate impacts on those by-way crossing locations.
 16. In response to comments received, provide a discussion of visual impacts that may occur for hikers on the Alleghany Trail (F.T. #701), Cascades National Recreation Trail (F.T. #70), and the Mountain Lake Wilderness looking at the pipeline corridor. Include measures that Mountain Valley would implement to avoid, minimize, or mitigate project-related visual impacts on those trails and their users.
 17. Document communications with the FS and BLM regarding the currently proposed pipeline route crossing of Craig Creek. Mountain Valley indicated to the FS that it went back to the original October 2015 route for the crossing of Craig Creek. The shapefiles submitted to the FS do not satisfy the FS requests, and that part of the route is inconsistent with Forest Plan standards and other guidance. That route also crosses an unnamed tributary which the FS said should be avoided.

Alternatives

1. Attachment B (Minor Route Variations and Deviations Incorporated into the October 2016 Proposed Route), filed on October 13, 2016, indicates that 45 new landowners could be affected by the route modifications. Indicate the number of

these new landowners that have signed an easement agreement with Mountain Valley.

2. Revise Attachment B (Minor Route Variations and Deviations Incorporated into the October 2016 Proposed Route), filed on October 13, 2016, to add a column for parcel numbers for each data row, and denote which parcel numbers are new.
3. Address the September 9, 2016 letter from the VADCR (accession number 20160909-5315). In particular, conduct an analysis of the VADCR's recommended route realignment around the Slussers Chapel Conservation Site in comparison to the corresponding segment of the currently proposed route (filed October 14, 2016) between about MPs 220.7 to 227.3 in Montgomery County, Virginia, the October 14, 2016 proposed route, and the October 2015 application route. Include a copy of a 7.5-minute USGS topographic quadrangle map illustrating the VADCR alternative route, October 2016 route, and October 2015 route in this area. The analysis should include the following comparative information in tabular format:
 - a. length (in miles) of the VADCR's suggested Slussers Chapel Conservation Site Avoidance Alternative route in comparison to the comparable portions of the October 2016 proposed route and October 2015 application route;
 - b. acreage of both the permanent and construction rights-of-way;
 - c. total size (acres) of non-typical work areas required;
 - d. distance (miles) of crossing of VADCR-designated conservation sites;
 - e. number of residences within 50 feet of the edge of the construction right-of-way;
 - f. number of springs and domestic water supply wells within 150 feet of the centerline;
 - g. number of waterbodies crossed, and total length (in feet) of all waterbody crossing combined;
 - h. number of wetlands crossed, total length (in feet) of all wetland crossings combined, and total wetland acres affected;
 - i. number of karst features, sinkholes, or caves within 50 feet of the construction right-of-way;
 - j. acres of habitat for federally listed species;
 - k. number of known archaeological or historic sites;
 - l. miles of federal lands crossed;
 - m. miles of federally-designated Wilderness Areas crossed;
 - n. acres of agricultural land affected
 - o. acres of forest cleared; and
 - p. miles of right-of-way that would be parallel or adjacent to existing rights-of-way.

4. Provide an undated analysis of the October 14, 2016 proposed route in comparison to the Hybrid 1A and 1B alternatives previously filed by Mountain Valley on April 21, 2016. Again, include appropriate maps, a narrative discussion of the alternatives, and a table comparing impacts on specific environmental resources, as listed in Alternatives Question #3 above.
5. Provide an environmental, technical, and feasibility comparison of an alternative route that would leave the proposed route between MP 238 to MP 239, progress eastward or southeastward approximately 2.2 miles to an existing powerline corridor, follow along the west and/or east side of that corridor and then turn westward to parallel the north side of the existing powerline corridor that intercepts the proposed route near MP 242.1. Include appropriate maps, a narrative discussion, and a table comparing impacts between the October 14, 2016 proposed route and this alternative route on specific environmental resources, as listed in Alternatives Question #3 above.
6. Based on comments received from an affected landowner (see accession number 20161223-5085), evaluate alternatives to using proposed access road MVP-RO-279.01 located near MP 239.3 that crosses through a VOF conservation easement. Confirm whether MVP-RO-279.01 would follow an existing road and provide details regarding any disturbance associated with constructing, improving, or connecting the road to the right-of-way. Also confirm whether MVP-RO-279.01 would be a temporary or permanent access road.
7. Provide an analysis of the October 14, 2016 proposed route in comparison to alternative routes suggested by the NPS for crossing the Blue Ridge Parkway (BRP). Document all communications with the NPS regarding the crossing of the BRP.
8. Attachment B of Mountain Valley's December 22, 2016 filing indicates that Mountain Valley is revising the POD for the FS to remove open trenching as an alternative means of crossing the ANST. Mountain Valley states that an HDD under the ANST is not a feasible alternative because of engineering reasons. Therefore, provide an alternative plan and methods for crossing the ANST in the event that the proposed bore fails.
9. Update table 3.5.3-1 filed on December 22, 2016 (Attachment DEIS Recommendation-16), with conclusions wherever possible and/or new information, for pending minor route variations. For example:
 - a. Landowner negotiations were ongoing for issues associated with parcels noted in accession numbers 20150316-5023 and 20150609-5017;
 - b. Provide the apparently missing analyses associated with "Variation 82" as mentioned for accession number 20160601-5121;

- c. The response for accession number 20150616-5100 only mentions access roads (confirm the apparent assertion that Mountain Valley would use only existing access roads on these parcels and clarify and provide details if there would be any disturbance associated with constructing, improving, or connecting any access road on these parcels), but makes no mention of alternative pipeline right-of-way routing analyses; and
 - d. Mountain Valley indicated that it “continues to evaluate” the parcels associated with accession number 20160406-5119.
10. Provide an analysis (similar in the format to table 3.5.3-1 from the draft EIS) for any other updated or newly reported landowner or land manager requested minor route variations submitted after the issuance of the draft EIS on September 16, 2016. Address accession numbers 20161221-5350, 20161219-5368, 20161207-0035, 20161201-5118, 20160920-5007, 20161017-0031, 20161220-5182, 20161212-5034 and 20161021-5169. If Mountain Valley cannot make the route adjustments requested by these landowners, explain why.

Reliability and Safety

1. In response to a stakeholder comment, provide details regarding the frequency of overflights during operations to monitor the pipeline. Include measures, as appropriate, that Mountain Valley would implement to minimize overflight noise and address privacy concerns.
2. In response to comments on the draft EIS, discuss how Mountain Valley would determine compensation for affected parties should an incident occur.
3. In response to comments on the draft EIS, revise DEIS table 4.12.1-3 to provide the name of each high consequence area (HCA) as well as the class location for each. As requested by Giles County, include a discussion of the Newport Recreation Center, Newport-Mount Olivet Methodist Church, and Doe Creek Farm as Class 3 HCAs.
4. We received a comment that the remote signal to close an MLV in the event of an incident would not work if the local area was experiencing a power outage or interruption of cellular service. Provide a discussion of the necessary power and cellular system including backup systems both in the area of the MLV and in the area of the remote control center.

Document Content(s)

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