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Harold Ward, Cabinet Secretary
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December 30, 2021

Mr. Michael Hatten
Chief, Regulatory Branch
United States Army Corps of Engineers
Huntington District
502 Eighth Street
Huntington, West Virginia 25701

Re: State §401 Water Quality Certification; LRH-2015-00592 and LRP-2015-798; Mountain Valley Pipeline, LLC; Mountain Valley Pipeline Project; Braxton, Doddridge, Fayette, Greenbrier, Harrison, Lewis, Monroe, Nicholas, Summers, Webster, and Wetzel Counties, West Virginia; WQC-21-0005

Dear Mr. Hatten:

I. Introduction and Project Background

The West Virginia Department of Environmental Protection-Division of Water and Waste Management ("WVDEP-DWWM" or "WVDEP"), in conjunction with the West Virginia Division of Natural Resources - Wildlife Resources Section ("WVDNR-WRS" or "WVDNR"), has completed its review of an application by Mountain Valley Pipeline, LLC ("MVP") for a Section 401 water quality certification. MVP submitted the application on March 4, 2021, for discharges from activities subject to the approval of the U.S. Army Corps of Engineers ("USACE" or "Corps") under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act in conjunction with the Mountain Valley Pipeline Project (the "Project").[1] WVDEP is authorized

[1] Neither the Project nor the pending Section 401 request is entirely new to WVDEP or to the Corps. The history of prior efforts to permit and certify federal licenses and permits is not repeated here but is discussed in prior opinions by the United States Fourth Circuit Court of Appeals. *See Sierra Club v. U.S. Army Corps of Eng'rs*, 981 F.3d 251, 254–56 (4th Cir. 2020) (granting stay of Huntington and Norfolk District verifications under nationwide permit 12); *Sierra Club v. U.S. Army Corps of Eng'rs*, 909 F.3d 635, 639–43 (4th Cir. 2018) (vacating prior version of Huntington District's verification); *Sierra Club v. State Water Control Bd.*, 898 F.3d 383, 384 (4th Cir. 2018) (denying petition

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by state law to exercise the State's authority and responsibility under Section 401 of the Clean Water Act to certify the compliance of activities subject to federal permits and licenses with state water quality requirements. W.Va. Code §§ 22-1-6(d)(7) and 22-11-7(a).

Since the application was submitted, two things of note have occurred. First, the Environmental Protection Agency (USEPA) published notice of its intention to reconsider and revise the Section 401 rule that it issued effective September 11, 2020. *See* 86 Fed. Reg. 29541 (June 2, 2021). Second, in late October 2021, a federal court in California vacated the 2020 rule pending remand to USEPA for reconsideration of the rule, resulting in a temporary return to USEPA's prior rule.[2] As a result, USACE advised WVDEP-DWWM in late November 2021 that MVP's certification application should be reviewed under the rule in effect prior to September 11, 2020.

To avoid later confusion should the recent ruling vacating the 2020 rule be stayed or overturned, WVDEP has reviewed the application for compliance with both the 2020 rule and the rule in effect before September 11, 2020. We believe that the Project may proceed in accordance with either version of USEPA's Section 401 rule. As discussed below and in our response to public comments, the Secretary has determined both that (1) there is reasonable assurance that the activity will be conducted in a manner which does not violate water quality standards in accordance with 40 C.F.R. §121.2(a)(3) (2019) and (2) the discharges from the proposed Project will comply with water quality standards in accordance with 40 C.F.R. § 121.7(c) (2020). WVDEP has also imposed certain conditions that it deems desirable and that are set out in Attachment A to this document.

Also, to avoid confusion, the scope of MVP's application and this certification decision are limited to discharges and water quality effects associated with USACE-regulated activities. They do not extend to the discharges from upland activities associated with the Project that are regulated by the Federal Energy Regulatory Commission (FERC) under the Natural Gas Act. In 2016, MVP sought a Section 401 certification for the FERC certificate from WVDEP for Project-related activities that were not also regulated by the USACE. By letter of November 1, 2017, WVDEP provided FERC with a waiver of the requirement that MVP obtain a Section 401 certification for those FERC-regulated discharges that fall outside of the USACE's authority. Today's action is not intended to re-open that 2017 waiver decision.[3] While this certification is limited to discharges and effects from USACE-regulated activities, the determination that those activities will comply with water quality standards includes the cumulative or combined effects of contributions from upland construction activities.

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challenging Virginia §401 certification); *see also Mountain Valley Pipeline, LLC v. N. Carolina Dep't of Env't Quality*, 990 F.3d 818, 824 (4th Cir. 2021) (detailing history of the project and Southgate extension).

[2] *See In re Clean Water Act Rulemaking*, __ F.Supp.3d__, No. C 20-04636, 2021 WL 4924844 (N.D. Cal. Oct. 21, 2021).

[3] WVDEP re-stated that position earlier this year. In February 2021, MVP applied to FERC for an amendment of its certificate. By letter of May 13, 2021, FERC asked our opinion whether any further Section 401 action was required for that amendment. On July 20, 2021, we advised FERC that the modification did not create the potential for new discharges not previously considered in our 2017 waiver. We also noted that it was WVDEP's intention to conduct a Section 401 review of all potential discharges from Corps-regulated activities, thereby assuring that all aspects of the Project were subject either to the 2017 waiver issued to FERC or the separate Section 401 application submitted in 2021 for the Corps-permitted aspects of the Project.

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WVDEP has imposed certain conditions to this certification that it deems desirable and that are set out in Attachment A to this document. A list of the primary documents WVDEP has reviewed as part of this decision are set out in Attachment B. WVDEP-DWWM received 406 written comments on the Section 401 application in response to public notice. In addition, a public hearing was requested, which WVDEP held on June 22, 2021. During the public hearing, 22 individuals commented on the proposed activity. Attachment C includes a summary of the substantive comments and WVDEP-DWWM's responses.

II. Project Description and Status

Mountain Valley Pipeline, LLC (MVP) proposes to complete construction of the Mountain Valley Pipeline (Project). The Project is an approximate 304-mile (197 miles of which are in West Virginia), 42-inch diameter natural gas pipeline, proposed to provide access to natural gas for use by local distribution companies, industrial users, and power generation utilities in the Mid-Atlantic and southeastern United States, as well as potentially in the Appalachian region. Construction of the Project commenced in February 2018 and is now substantially complete.

In West Virginia, the completion of the Project will involve 664 crossings of aquatic resources that result in unavoidable temporary and permanent impacts to Waters of the United States falling within the jurisdiction of the USACE, Huntington and Pittsburgh Districts. Of these, MVP plans to conduct 38 bores (including three Section 10 waters) which will cross under 57 aquatic resources using trenchless methods and, except for use of timber mats to gain access at most of the sites, will not require USACE authorization because they will not involve any discharges of dredged or fill material. Three trenchless crossings will take place on Section 10 waters and are required to comply with the requirements of this Certification. Neither temporary nor permanent fills are planned for these Section 10 waters.

The Project will result in permanent impacts to 1,276 linear feet of stream and 0.4458 acres of wetland. Permanent impacts will result from activities such as restoring the pipeline right-of-way, constructing permanent access roads, and installing culverts along these roads to maintain stream connectivity. The permanent impacts are associated with 37 stream crossings and 21 wetland crossings. The Project will result in temporary impacts to 20,868 linear feet of stream and 11.7101 acres of wetland, which includes the conversion of 1.7503 acres of wetland resources from palustrine forested ("PFO") and scrub shrub ("PSS") to palustrine emergent ("PEM"). The Project will also result in wetland resource conversion from PFO and PSS to PEM at 28 wetland crossings affecting 1.7503 acres of wetland resources. The impacts will occur within the project limits at 364 stream crossings and 211 wetland crossings. Most of the temporary impacts will result from the excavation and backfilling of the pipeline trench as the Project crosses wetlands and streams.

III. Water Quality Requirements and Regulatory Reviews

Since 1982, WVDEP-DWWM has administered the Clean Water Act National Pollutant Discharge Elimination System (NPDES) program in West Virginia pursuant to authority granted under the West Virginia Water Pollution Control Act. It has also adopted and administers, subject

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to USEPA review, water quality standards for the State in accordance with Section 303 of the Clean Water Act. Those standards appear at West Virginia Code of State Rules § 47-2-1, *et seq.* The standards include a list of protected water "uses" and "criteria" to protect them. Some of the criteria are numeric, most often expressed as an allowable concentration of a particular substance. WVDEP-DWWM has not established a water quality criterion for sediment or suspended solids but has issued criteria for metals that may be influenced by sediment (such as iron, manganese, and aluminum) and a criterion for turbidity, which may also be influenced by sediment. Other criteria are narrative and prohibit defined significant impacts to the aquatic ecosystem. W. Va. Code R. § 47-2-3.2.

The water quality standards also include an antidegradation policy required by the Clean Water Act. 33 U.S.C. § 1313(d)(4)(B) and 40 C.F.R. § 131.12. West Virginia's antidegradation policy is at W. Va. Code R. §47-2-4.1. WVDEP-DWWM has also adopted a procedural rule to implement its antidegradation policy. *See* W. Va. Code R. § 60-5-1, *et seq.* Under the antidegradation policy, the State's waters fall into one of three categories or "tiers" of water quality, each of which is subject to a different standard of review and protection similar to USEPA's federal antidegradation provisions. Generally speaking, those tiers of review (1) prohibit lowering of water quality in waters already "impaired," (2) prevent "significant degradation" in the majority of waters absent a detailed socio-economic analysis, and (3) in the most protected waters, allow only a "temporary lowering of water quality." W. Va. Code R. §§ 60-5-4 to -6.

For permanent fills that displace portions of waters and their corresponding "uses" altogether, WVDEP ensures compliance with water quality standards by relying on the USACE's application of the Section 404 program to prevent significant degradation to the aquatic ecosystem as a whole. A component of that program includes mitigation to compensate for the unavoidable losses. *See* W. Va. Code R. § 47-5A-3.2 (recognizing that WVDEP may require mitigation and must provide credit for mitigation that is a required component of a Section 404 permit issued by the USACE).

For discharges of dredged or fill material that do not fully displace waters—such as temporary water crossings associated with the construction of water, sewer, and gas pipelines—WVDEP is charged with evaluating the impact of the discharge on the quality of the surrounding or downstream water. For pipelines, the primary pollutant of concern with both upland construction and USACE-regulated discharges is sediment released from earth-disturbing activities. West Virginia does not, however, have a water quality criterion for sediment. Nor do WVDEP's antidegradation procedures specify how to evaluate the impacts of pipeline construction on water quality. WVDEP's antidegradation procedures were adopted primarily for traditional NPDES permits where the potential impacts on receiving waters of "point sources" with known volumes and specific concentrations of pollutants can readily be calculated. Discharges of stormwater and fill material are not clearly addressed by our procedural rule.[4] For them, consistent with Section 1.5.d of our implementation rule, we turn to USEPA for guidance.[5]

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[4] *See* WVDEP Response to Comments for further discussion of the antidegradation implementation procedures.

[5] WVDEP's antidegradation implementation rule provides that information from other "environmental processes and reviews" and from "facilities plans" "may be used to provide part or all of the requirements of the antidegradation procedure and review." W. Va. Code R. § 60-5-1.5.d.

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The USEPA regulates construction stormwater under its Construction General NPDES Permit (CGP), issued originally in 1992. 57 Fed. Reg. 41176 (Sept. 9, 1992). The most recent version was issued in 2017. The USEPA's CGP does not rely on numeric effluent limits. Instead, it relies on the use of engineering controls, i.e., best management practices (BMPs), to protect water quality. *See* USEPA's 2017 Construction General Permit Fact Sheet, pp. 9-11 and 25-51.[6]

Since 2012, USEPA has satisfied federal antidegradation requirements for new discharges of construction stormwater by imposing more stringent or "enhanced" BMPs on projects that discharge to "sensitive waters" (Tier 2, Tier 3, and sediment-impaired waters). The USEPA determined that by requiring faster site stabilization and more frequent inspections than for non-sensitive waters, the CGP "will result in stormwater discharges being controlled as necessary to meet applicable water quality standards (which include state antidegradation requirements)." USEPA's 2012 Construction General Permit Fact Sheet § VIII.3.2; *see also id.* (determining that "compliance with the [CGP] generally will be sufficient to satisfy Tier 2 . . . and Tier 3 antidegradation requirements because the controls will not result in a lowering of water quality, making individualized Tier 2 or Tier 3 review unnecessary.").

The USEPA reissued its CGP in 2017. There, it reinforced that the use of engineering controls on erosion and sedimentation, coupled with increased site inspections and faster site stabilization, would "not result in a lowering of water quality" and would thereby "satisfy Tier 2 and Tier 3 antidegradation review," "making individualized Tier 2 or Tier 3 review unnecessary." USEPA 2017 Construction General Permit—Fact Sheet, § VI, Part 3.2, pp. 53-54. As a result, applicants for coverage under the CGP are not required to collect baseline water quality data and evaluate the site-specific effects of discharges. USEPA also noted that the engineering controls are "designed to prevent the mobilization of sediment and sediment-bound pollutants, such as metals and nutrients." *Id.* § II, p. 9. USEPA also noted that the permit is not static. It requires registrants to take corrective measures where USEPA or the registrant become aware the permit is not meeting its standards. *Id.* § VI, Part 3.1. p. 51.

Section 402(l)(2) of the Clean Water Act exempts the oil and gas industry from USEPA's construction stormwater program. Nevertheless, WVDEP-DWWM has chosen to impose a state general permit program with controls and processes nearly identical to USEPA's construction stormwater program on the oil and gas industry. *See* WVDEP's O&G CGP (Permit No. WV0116815—issued 2013).[7] Like the USEPA's CGP, WVDEP's General Permit relies on engineering controls and adaptive management processes to control sediment and its constituents. The General Permit "establishes minimum standards of practices (best management practices) for specific situations rather than specific effluent limitations for stormwater discharges. *** This general permit allows the meeting of water quality standards with the proper installation of the minimum standards set forth in the general permit . . . ." It requires permittees to submit for review and approval detailed stormwater pollution prevention plans and provides that the plans must be modified as necessary to include additional or modified controls to correct problems. 2013 O&G CGP, Fact Sheet, § G, p. 5.

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[6] Available at https://www.epa.gov/npdes/epas-2017-construction-general-permit-cgp-and-related-documents.

[7] Available at https://dep.wv.gov/WWE/Programs/stormwater/ogcsw/Pages/default.aspx.

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WVDEP has also issued an Erosion and Sediment Control BMP Manual (2006, *rev'd* 2016) (BMP Manual), which describes "standardized and comprehensive erosion and sediment control management practices" for use in "developing sediment control plans for the General . . . Permit for Stormwater Associated with Construction Activities." BMP Manual, p. 1-1. It also includes the use of "instream BMPs" for stream and water crossing activities and removal of water from excavation sites and sumps and notes that "WVDEP expects that the selection and implementation of appropriate BMPs will result in compliance with standards for surface water discharges from construction sites." *Id.* p. 1-3, 3.21-1 to -27 and 3.22-1 to -8. As discussed below, WVDEP has determined that the application of these programs to MVP's USACE-regulated activities will prevent any significant degradation of water quality or water uses.

IV. Review of MVP's USACE-Regulated Activities

The proposed USACE-regulated activities under Section 404 of the Clean Water Act consist of discharges of fill material into waters of the United States for site development, road crossings, and open-cut water crossings. As noted above, some of the fills will be permanent. Other activities, such as open-cut water crossings, will not permanently displace waters. Rather, they will be conducted in areas where water is diverted from the construction site ("in the dry") and will last only so long as necessary to install the pipeline, backfill the open cut, and restore the waterbody before water is returned to the area. The remaining water crossings will be accomplished with trenchless methods, which involve the use of various drilling techniques to bore and install the pipeline beneath waters. Of these trenchless crossings, the only ones directly regulated by the USACE are the three proposed under navigable rivers in West Virginia (Elk, Gauley, and Greenbrier) pursuant to Section 10 of the Rivers and Harbors Act.

A. Permanent Fills or Impacts

These impacts to streams and wetlands were evaluated utilizing the West Virginia Stream and Wetland Valuation Metric system, developed by an interagency team that included the USACE, WVDEP, and USEPA. To compensate for permanent stream and wetland impacts, as well as the conversion of some wetlands from PFO/PSS to PEM, MVP proposes to utilize mitigation bank credits or in-lieu fee credits. *See infra*, p. 8. The use of mitigation bank credits and in-lieu fee credits is identified as appropriate in the Compensatory Mitigation for Losses of Aquatic Resources Final Rule, 33 C.F.R. Part 332 (2008). *See also* West Virginia In Lieu Fee Stream and Wetland Mitigation Program Instrument (2013) (detailing joint USACE-WVDEP program). Compensatory mitigation will be required as a condition of MVP's Corps-issued permit. Pursuant to WVDEP's Section 401 certification rule, "[t]he Secretary shall provide credit for any mitigation that is a required component of the permit issued by the USACE pursuant to 33 U.S.C. 1344." W. Va. Code R. § 47-5A-3.2.a. WVDEP finds these credits are sufficient to compensate for permanent impacts to aquatic resources and thereby preserve the uses of state waters.

WVDEP has also determined that the application of the engineering controls required by WVDEP's O&G CGP and by construction plans submitted to the USACE by MVP will protect water quality from sediment related to the construction of permanent fills. Further discussion of those engineering controls and permits follows in the discussion of temporary impacts caused by water crossings and related construction.

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B. Temporary Fills and Impacts

Most of the temporary impacts will consist of waterbody and wetland crossings in which MVP constructs and then backfills the pipeline trench. These construction activities are subject to extensive engineering and process controls described in the plans approved as part of MVP's O&G CGP registration, its Section 404 application to the USACE, its request for State 401 water quality certification, and a supplemental monitoring, restoration, and mitigation plan described below.

V. Engineering Controls and Best Management Practices ("BMPs")

WVDEP previously approved MVP's registration for coverage under the O&G CGP in 2017. The approved controls in MVP's O&G CGP Registration include BMPs for both upland disturbance and waterbody crossings. They include measures for restoring stream bottoms and wetlands with native material and stabilizing them to minimize sediment movement. These measures are consistent with WVDEP's BMP Manual and have proven effective to prevent scour of stream bottoms and sediment movement. MVP's Erosion and Sediment Control Plan, included as part of its O&G CGP registration, includes a narrative construction sequence and description of controls for managing water crossings, dewatering work areas, and preventing spills equipment and industrial fluids. *See* MVP Erosion and Sediment Control Plan ("ESCP"), p. 13 (Nov. 2016). The CGP also requires inspection and maintenance of engineering controls to identify and address issues as they arise. CGP § G.4.d.1.A. If existing controls do not fully control sediment or field conditions warrant, then MVP must revise its site-specific pollution prevention plans. CGP § G.4.c.

The WVDEP approved MVP's proposed controls in 2017. The WVDEP determined, after reviewing public comments, that the site-specific controls proposed by MVP included enhanced BMPs and additional controls that were functionally equivalent to the enhanced BMPs developed by USEPA for ensuring no degradation of "sensitive waters." *See* WVDEP Responsiveness Summary, Registration No. WVR310667 (Nov. 1, 2017), p. 77 (finding that compliance with the O&G CGP would satisfy Tier 2 review and that MVP's site-specific control plans "exceed USEPA required controls to satisfy Tier 3 antidegradation, are sufficient to not result in a lowering of water quality, making individualized Tier 2 or 3 review unnecessary."). Although registration approvals are subject to challenge before the West Virginia Environmental Quality Board, no challenge was filed to WVDEP's approval of MVP's application. As authorized by West Virginia Code of State Rules § 60-5-1.5.d., WVDEP relies on findings made in that review to support its determination here that both the upland and water crossing activities are covered by engineering controls that will prevent lowering of water quality from releases of sediment and its constituents (such as metals and turbidity) and thereby ensure that the individual and cumulative effects of the USACE-regulated discharges will comply with State water quality requirements.

More specifically, the Project will require temporary and permanent impacts to aquatic resources to facilitate the installation of the 42-inch diameter natural gas pipeline. The Project will result in 51 crossings of Tier 1 streams, while the remaining stream crossings will take place on Tier 2 waters. As stated above, the Project will not cross any Tier 3 waters. The WVDEP has conducted extensive water quality monitoring as part of its process to identify impaired waters for inclusion on the State's 303(d) list for TMDL development. The TMDLs consist of approved allocations of pollutant loadings that are designed to restore water quality and uses. The TMDLs

authorize future construction activities like this Project, but control sediment releases by restricting the disturbed acreage allowed at any one time and/or by requiring additional erosion and sediment engineering controls.

In October 2017, MVP modified its CGP registration to include both a TMDL Watershed Analysis for the sediment-impaired streams and enhanced controls for the same sites to ensure that its activities complied with the TMDL. *See* MVP TMDL Watershed Analysis (Oct. 2017). Likewise, while MVP does not propose to cross any Tier 3 waters, it will cross some that are located upstream of Tier 3 water segments. In the fall of 2017, MVP provided WVDEP with a Tier 3 Stream Report identifying the Tier 3 waters. To protect those waters, MVP's Erosion and Sediment Control Plan committed to advanced BMPs at upstream crossings. *See* ESCP, pp. 7, 13 and Attachment 2, Table 1. WVDEP relies also on findings made in that review to support its review here.

Impaired waters to be crossed by the Project were identified in the following watersheds: West Fork, Middle Ohio North, Little Kanawha, Elk, Gauley, Lower New, Greenbrier, and Upper New. Impairments identified in Tier 1 waters included fecal coliforms, CNA biological, iron, pH and selenium. The predominant sources of both organic enrichment and fecal coliform bacteria in the Tier 1 waters subject to review are inadequately treated sewage and runoff from agricultural land uses.

In the Gauley River watershed, one proposed Tier 1 stream crossing exhibits pH impairment. Another proposed Tier 1 crossing exhibits selenium impairment. The nature of the proposed Project is not expected to contribute to water quality impairment for pH or selenium. In streams for which iron impairment was identified, sedimentation was a significant stressor and contributed to total iron. TMDLs have been developed for Tier 1 waters with iron impairment and the assessment for iron included representation and allocation of iron loadings associated with sediment. All of the stream segments identified to be crossed by the project have been assessed in accordance with West Virginia Code of State Rules § 60-5-1, *et seq.* and the proposed Project impacts were not deemed to be significant since appropriate best management practices (BMPs) are to be utilized ensuring protection from sediment entering waters

The Project's plans indicate that where permanent fill is placed in waters, there is no reasonable expectation that water quality will be degraded. The permanent fill activities proposed for the Project predominantly include the installation of culverts or box culverts for access road development and compressor stations. These types of fill activities involving the placement of structures have little to no potential to affect water quality. In some ephemeral and intermittent waters, low water access road crossings will be implemented utilizing the discharge of clean and coarse non-erodible material with 15% or less fines and properly sized to withstand expected high flows. None of the proposed permanent impacts are expected to result in water quality impairment or degradation of designated uses when complying with the conditions of this Certification.

The discharge of dredge material associated with the temporary pipeline installation crossings and the temporary and permanent discharges of fill material authorized by the USACE under its §404 authority do not have a significant potential to release pollutants. MVP proposes to conduct all of its "open cut" crossings of waters using "dry" methods. That entails construction

techniques that exclude or divert water from the excavation area as MVP excavates and backfills the pipeline trench. MVP Application for Certification, p. 4 (Mar. 4, 2021). No deposits of dredged or fill material will occur in flowing or standing water when they would be susceptible to mobilization. Instead, the areas must be backfilled and stabilized before water is restored to the work area. ESCP, p. 16. There is an extensive body of literature on the effectiveness of these techniques to prevent significant mobilization of sediment into the water column and to protect aquatic life, which WVDEP has reviewed in its attached response to comments. FERC concurs. FERC previously reviewed the impacts of MVP's proposed water crossing construction techniques. *See* Final EIS Mountain Valley Project and Equitrans Expansion Project (June 23, 2017), 4-119 to -120 (citing U.S. Geological Survey study concluding that turbidity from dry cuts is minimal compared to natural runoff events); 4-136 (no long-term or significant water impacts expected based on erosion and sediment control measures, contingency plans for protecting public water supplies and karst mitigation plan).

The WVDEP expects that MVP, at temporary stream and wetland crossings where excavation is required, will comply with Certification conditions that require that the stream bed material and wetland soils be stockpiled separately from other excavated material and will be used in the restoration of the aquatic resource being crossed. The work area during excavation must remain isolated from flowing water through the use of dam and flume or dam and pump method so as to prevent any sediment from being entrained and carried downstream when appropriate BMPs are utilized. The original stream substrate and wetland hydric soils must be placed back on the surface of the ground or stream bed once the trench is backfilled and the BMPs are removed to allow free flowing water back over the wetland and stream work sites. Since this original substrate and soil that existed at the time of construction initiation is also the same material in place prior to the removal of BMPs there is little to no opportunity for any sediment that was not already exposed to flowing water to be exposed post construction, thus the potential for any water quality degradation is not considered to be significant. The WVDEP also anticipates that the temporary discharge of fill material in the form of stream diversions, culverts, and/or timber mats will not contribute to any water quality impairment so long as appropriate BMPs are utilized.

Finally, before work stopped on Project-related water crossings, MVP completed open-cut crossings of approximately 23 streams and nine wetlands in West Virginia. WVDEP inspectors evaluated Project work multiple times per week and conducted dozens of investigations. While there were several minor violations, the WVDEP's Environmental Enforcement group found no significant adverse effects at the stream crossings where MVP conducted work.

VI. Supplemental Assessment and Mitigation

In addition to the engineering controls designed to prevent degradation, MVP proposed to both the USACE and to the WVDEP a six-part plan to assess pre-construction conditions, restore temporary impact sites, react to any unplanned impacts, and to obtain supplemental migration credits. *See* MVP's Comprehensive Stream and Wetland Monitoring, Restoration, and Mitigation Framework ("Stream and Wetland Mitigation Framework").

The Stream and Wetland Mitigation Framework consolidates the Project's proposed stream and wetland monitoring restoration and mitigation measures into a comprehensive framework and outlines a systemic approach to verifying that the temporary impacts to each jurisdictional aquatic

resource are appropriately restored to a comparable baseline condition. The Stream and Wetland Mitigation Framework consists of six elements: (1) additional assessment of prescribed baseline conditions at each water crossing (including geomorphic characteristics, vegetation, prescribed water quality criteria, use of USEPA's Rapid Bioassessment Protocol, and evaluation of aquatic insect population diversity); (2) a restoration work plan for restoring temporary impacts after construction; (3) performance standards consisting of measurable restoration goals that can be evaluated through post-restoration monitoring; (4) a three-year monitoring plan to evaluate attainment of restoration performance standards; (5) requirements for developing site-specific corrective actions if any restored stream or wetland is not making expected progress toward attaining the success criteria for restoration; and (6) establishment of a program for supplemental compensatory mitigation for even temporal impacts—which exceeds the requirements of USEPA and the USACE's 2008 mitigation rule. The mitigation for temporal impacts will compensate at three percent of the rate for permanent impacts for the duration of the temporary fill. Once the fills are removed, the mitigation rate will be applied for another year of stream impacts and another two years for wetlands. Impacts will be evaluated using the West Virginia Stream and Wetland Valuation Metric. The combination of the O&G CGP, enhanced erosion and sediment controls, frequent WVDEP inspections, and the Mitigation Framework will enable the USACE-regulated activities to comply with water quality standards, prevent any significant degradation of regulated waters, restore aquatic habitat in wetlands and streams, and provide additional compensatory mitigation for the temporary impacts.

The permanent discharge of fill material resulting in a loss of habitat will be mitigated through the use of the West Virginia Stream and Wetland Valuation Metric (SWVM) functional assessment tool designed to offset the functional loss of aquatic habitat. *See* W. Va. Code R. § 47-5A-6.2 (2014) and Compensatory Mitigation for Losses of Aquatic Resources, 33 C.F.R. § 332 (2008).

Permanent impacts to streams and wetlands were evaluated utilizing the West Virginia Stream and Wetland Valuation Metric (SWVM). The SWVM is a tool utilized to synthesize correlations derived from multiple established individual assessment methodologies. Information required for stream impacts includes: the extent of a proposed impact; a broad spectrum of physical, chemical and biological indicators; and other factors including temporal loss. Individual assessment methodologies utilized within the state of West Virginia and incorporated into the SWVM for streams include the USEPA Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers and the Stream Condition Index for West Virginia Wadeable Streams, as well as water quality data utilized by the WVDEP (Water Quality Data Sheet). These individual assessments are utilized together within the SWVM to interpret the physical, chemical and biological integrity of waters. The SWVM utilizes this data to generate an index score which is multiplied by the linear feet of impact to result in a unit score, which is offset through acquisition of credits via mitigation banks, in-lieu fee programs, or permittee responsible mitigation. Acquired credits offset the functions lost as a result of permanent impacts by implementing mitigation projects in the impact watershed or secondary service area watershed. To compensate for permanent stream and wetland impacts, as well as the conversion of some wetlands from "PFO"/"PSS" to "PEM," the applicant proposes to utilize mitigation bank credits and in-lieu fee credits if necessary. The use of mitigation bank credits is identified as a preferred option in the mitigation hierarchy and appropriately complies with the Rules for Individual State Certification

of Activities Requiring a Federal Permit, W. Va. Code R. § 47-5A-6.2 (2014) and Compensatory Mitigation for Losses of Aquatic Resources, 33 C.F.R. § 332 (2008).

Project implementation will include the use of appropriate erosion and sedimentation control best management practices in accordance with the WVDEP O&G CGP requirements for all stream crossings and work in Waters of the United States. MVP's WVDEP O&G CGP requires implementation of BMPs throughout the entire Project that are equivalent to those required by the USEPA's Construction General Permit (CGP) for sites discharging to Tier 1 sediment impaired waters, Tiers 2 and Tier 3 waters. The use of appropriate BMPs was determined by USEPA in 2012 to ensure, "stormwater discharges being controlled as necessary to meet applicable water quality standards (which include state antidegradation requirements)." USEPA 2012 CGP Fact Sheet, § VIII.3.2.

Finally, MVP proposes three trenchless crossings of traditionally navigable waters in West Virginia. It proposes a guided conventional bore under the Elk River in Webster County, microtunneling beneath the Gauley River in Nicholas County, and a Direct Pipe crossing of the Greenbrier River in Summers County. MVP explains that these technologies are not reasonably expected to breach river bottoms, contribute to an "inadvertent return" of any drilling fluids, or otherwise result in a discharge. While WVDEP agrees with those assessments, it requires in the attached conditions that MVP adhere to its previously submitted inadvertent return plan for the three bores.

VII. Conclusion

State § 401 Certification, as required by Section 401(a)(1) of the Clean Water Act, is granted subject to the conditions contained in Attachment A. Certification shall be effective 15 days from the date of this letter. Affected parties may request a hearing in accordance with Rules for Individual State Certification of Activities Requiring a Federal Permit, W. Va. Code R. § 47-5A-7 (2014).

Sincerely,

Katheryn Emery Digitally signed by: Katheryn Emery DN: CN = Katheryn Emery email = katheryn.d.emery@wv.gov C = US Date: 2021.12.30 13:29:29 -05'00'

Katheryn Emery, P.E.
Acting Director

cc: Robert J. Cooper
Mountain Valley Pipeline, LLC.
2200 Energy Drive
Canonsburg, PA 15317

US Army Corps of Engineers, Huntington District – Adam Fannin
US Army Corps of Engineers, Pittsburgh District – Tyler Bintrim
US Army Corps of Engineers, Pittsburgh District – Jared Pritts
US Environmental Protection Agency – Christine Mazzarella
US Fish and Wildlife Service – Jennifer Norris

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WVDNR-Wildlife Resources Section, Elkins – Danny Bennett
WVDEP-Environmental Enforcement – John Hendley

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ATTACHMENT A

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CONDITIONS REQUIRED FOR ISSUANCE OF FEDERAL PERMITS AND LICENSES
REQUIRING STATE SECTION 401 CERTIFICATION

Applicant: Mountain Valley Pipeline, LLC
WQC No.: WQC-21-0005
USACE File No.: LRH-2015-00592 and LRP-2015-798
Date: December 30, 2021

1. To protect aquatic life and reduce turbidity and disturbance to aquatic resources the operation of equipment in-stream is to be minimized and accomplished during low flow periods when practical. Ingress and egress for equipment outside the immediate work area requires prior approval of the WVDNR Office of Land and Stream. This condition is required in accordance with Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3.2 (2016) and Wildlife Resources Declaration of Policy, W.Va. Code § 20-2-4 (2017).

2. To protect the designated uses of waters of the state the permittee will investigate for the presence of water supply intakes or other activities within 1/2 mile downstream. The permittee will give notice to operators of any such water supply intakes and such other water quality dependent activities as necessary before beginning work in the watercourse in sufficient time to allow preparation for any unanticipated change in water quality. This condition is required in accordance with Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3.2 (2016).

3. To protect aquatic resources from unauthorized discharge of pollutants, storage and refueling areas shall not be located within any surface waterbody. All Project-related spills which are likely to impact water or wetlands shall be promptly reported to the State Center for Pollution, Toxic Chemical and Oil Spills, 1-800-642-3074. This condition is required accords with Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3.2 (2016) and West Virginia Water Pollution Control Act, W.Va. Code § 22-11-8 (2014).

4. To reduce sedimentation of aquatic resources and increased turbidity it is required that upon completion of in-stream operations, all disturbances below the ordinary high-water mark will be properly stabilized as soon as practicable following completion of the crossing to prevent soil erosion. Where possible, stabilization shall incorporate revegetation using bioengineering as an alternative to riprap. If riprap is utilized, it is to be of such weight and size that bank stress or slump conditions will not be created due to its placement. Fill is to be clean, nonhazardous and of such composition that it will not adversely affect the biological, chemical or physical properties of the receiving waters. Unsuitable materials include but are not limited to: copper chromium arsenate (CCA) and creosote treated lumber, car bodies, tires, large household appliances, construction debris, and asphalt. To reduce potential slope failure and/or erosion behind the material, fill containing concrete must be of such weight and size that promotes stability during expected high flows. Loose

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large slab placement of concrete sections from demolition projects greater than thirty-six inches in its longest dimension and tires are prohibited. Rebar or wire in concrete should not extend further than one (1) inch. All activities require the use of clean and coarse non-erodible materials with 15% or less of like fines that are properly sized to withstand expected high flows. This condition is required in accordance with Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3.2 (2016) and the West Virginia Water Pollution Control Act, W.Va. Code § 22-11-8 (2014).

5. To protect aquatic resources from unpermitted discharges consistent with the requirements of the West Virginia Water Pollution Control Act, W. Va. Code § 22-11-4(a)(16) (2014) and Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-1, *et seq.* (2016), concrete shall not be permitted to enter the watercourse unless contained by tightly sealed forms or cells. Concrete handling equipment shall not discharge waste washwater into wetlands or watercourses at any time without adequate wastewater treatment as approved by the WV DEP.

6. To protect stream stability and avoid unnecessary degradation of aquatic resources, the Project Proponent should avoid removal of riparian vegetation to the greatest extent possible. This condition is required in accordance with Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3 (2016).

7. Spoil materials from the watercourse or onshore operations, including sludge deposits, will not be dumped in the watercourse, or deposited in wetlands or other areas where the deposit may adversely affect the surface or ground waters of the State consistent with the requirements set forth in the West Virginia Water Pollution Control Act, W. Va. Code § 22-11-4(a)(16) (2014).

8. To protect the water quality of aquatic resources runoff from any storage areas or spills will not be allowed to enter storm sewers without acceptable removal of solids, oils and toxic compounds. Discharges from retention/detention ponds must comply with permit requirements of the National Pollutant Discharge Elimination System permit program of the WVDEP DWWM. This condition is required in accordance with the West Virginia Water Pollution Control Act, W. Va. Code § 22-11-4(a)(16) (2014) and Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3 (2016).

9. To protect the integrity of aquatic resources the discharge of untreated sewage temporary sanitary facilities, for use during construction only, will be of a type approved by the County Health Department in which the activity is taking place in accordance with the West Virginia Water Pollution Control Act, W. Va. Code § 22-11-4(a)(16) (2014) and Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3 (2016).

10. To ensure that certified activities comply with the requirements of the West Virginia Water Pollution Control Act, W. Va. Code § 22-11-4 (2014) and Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3 (2016), the permittee will provide written notice (which includes email) of the proposed start-up date to the WVDEP-Environmental Enforcement (EE), fifteen days in advance of initiation of any activity authorized by the certification. The address for EE is 601 57th Street SE, Charleston, West Virginia 25304.

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11. To protect the public health, safety and the environment from the effects of the improper, inadequate or unsound management of hazardous wastes, permittees are required to advise the WVDEP DWWM (Hazardous Waste Section), telephone 304-926-0495, should potentially hazardous waste materials be located prior to disturbance of material. This condition is required in accordance with the Hazardous Waste Management Act, W.Va. Code § 22-18-2(b) (2011).

12. To ensure compliance with applicable water quality requirements the permittee shall make the construction contractor(s) aware of conditions of the State §401 Water Quality Certification and any other state permit issued in accordance with the West Virginia Water Pollution Control Act, W.Va. Code § 22-11-4 (2014). A copy of the State 401 Certification shall be available at the project site until the project is complete.

13. To protect mussel populations in accordance with state and federal requirements, should native freshwater mussels be encountered during construction, all activity reasonably expected to jeopardize the population is to cease immediately and the WVDNR Wildlife Resources Section, Wildlife Diversity Program is to be contacted (304-637-0245) to determine significance of the mussel population and the action to be taken. This condition is required in accordance with; Rules for Individual State Certification of Activities Requiring a Federal Permit, W. Va. Code R. § 47-5A-3.1 (2014), Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-1, et seq. (2016), Possession of Wildlife, W. Va. Code § 20-2-4 (2017) and Fishing Regulations W. Va. Code R. § 58-60-5.11 (2020).

14. For permanent installation of pipe, box, and arched culvert crossings the inlet/outlets must be designed in such a manner as to maintain substrate in the bottom of the culvert (culverts installed in bedrock or with a stream gradient of 4% or greater do not need to be countersunk). Countersinking the culvert to the sub-pavement of the streambed, backwatering or the use of a bottomless culvert will generally fulfill this requirement. This condition is required to ensure the protection of the chemical, physical and biological integrity of the aquatic resource in accordance with the West Virginia Water Pollution Control Act, W. Va. Code § 22-11-8 (2014), Antidegradation Implementation Procedures, W. Va. Code R. § 60-5-1, et seq. (2008), and Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-1, et seq. (2016).

15. To ensure that work is conducted in accordance with the terms and conditions of this §401 WQC, representatives from WVDEP-DWWM and WVDNR-WRS will be allowed to inspect the authorized activity at any time deemed necessary in accordance with the West Virginia Water Pollution Control Act, W. Va. Code § 22-11-4(c) (2014).

16. WVDEP-DWWM is to be informed within two business days of the applicant's knowledge of any slips that have impacted a stream and/or wetland. This condition is required in accordance with Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-1, *et seq.* (2016) and Antidegradation Implementation Procedures, W. Va. Code R. § 60-5-1, *et seq.* (2008).

17. To protect water quality and the designated uses of waters within the vicinity of this project, MVP must adhere to the Inadvertent Return Plan provided to the WVDEP-DWWM with the §401 WQC application when conducting any bore crossing of a Section 10 river. This

condition is required to ensure the protection of the chemical, physical and biological integrity of the aquatic resource in accordance with the West Virginia Water Pollution Control Act, W. Va. Code § 22-11-8 (2014), Antidegradation Implementation Procedures, W. Va. Code R. § 60-5-1, *et seq.* (2008), and Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-1, *et seq.* (2016).

18. To prevent permanent impacts to aquatic resources associated with equipment tracking in wetlands, the use of protective mats is required. This condition is required in accordance with Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-1, *et seq.* (2016) and Antidegradation Implementation Procedures, W. Va. Code R. § 60-5-1, *et seq.* (2008).

19. To protect water quality and the designated uses of waters within the vicinity of this project, MVP must adhere to the Karst Mitigation Plan provided to the WVDEP-DWWM with the §401 WQC application. This condition is required in accordance with W. Va. Code R. § 47-2-1 *et seq.* (2016) and the Groundwater Protection Regulations, W. Va. Code R. § 47-58 (1994).

20. To protect the integrity of aquatic resources dredging for backfill material is not allowed in accordance with Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-1, *et seq.* (2016) and Antidegradation Implementation Procedures, W. Va. Code R. § 60-5-1, *et seq.* (2008).

21. Submarine pipeline stream crossings must be designed and constructed to prevent flotation and the possibility of leakage or rupture and the top of pipelines must be buried a minimum of three (3) feet below the stream bottom in accordance with the West Virginia Water Pollution Control Act, W. Va. Code § 22-11-8 (2014), Antidegradation Implementation Procedures, W. Va. Code R. § 60-5-1, *et seq.* (2008), and Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-1, *et seq.* (2016).

22. To prevent erosion of stream banks at Right of Way (ROW) crossings all waterbody banks are to be returned as close as practicable to preconstruction contours in accordance with the Restoration Plan and Stream and Wetland Mitigation Framework. This condition is required in accordance with Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-1, *et seq.* (2016) and Antidegradation Implementation Procedures, W. Va. Code R. § 60-5-1, *et seq.* (2008).

23. To ensure water contact recreation (Category C) uses are protected, where it is apparent that small boats, inner tubes, swimmers, etc. could be using the stream in the work area, easily seen warning signs must be placed approximately 50 feet upstream and downstream of the stream crossings construction site to advise stream users of the potential danger. Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-6.4 (2016)

24. To maintain the biological integrity of the state's fisheries a spawning waiver is required for in-stream work in designated warm water streams and their adjacent tributaries during the fish spawning season of April 1 to June 30 and for trout waters and their adjacent tributaries during the trout water fish spawning season of September 15 to March 31. Fish spawning waivers must be requested from the West Virginia Division of Natural Resources

Coordination Unit. In-stream work may occur during the respective spawning season in ephemeral waters without a waiver if all reasonable measures are taken to minimize turbidity and sedimentation downstream associated with the proposed project. This condition is required in accordance with Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3.2 (2016) and Wildlife Resources Declaration of Policy, W. Va. Code § 20-2-4 (2017).

25. Temporary impacts associated with stream and wetland crossings are to be monitored for a minimum period of 3 years. MVP will adhere to the monitoring procedures, adaptive management procedures, reporting and mitigation requirements set forth in the Stream and Wetland Mitigation Framework. If adaptive management procedures are proposed, then MVP shall submit them to the WVDEP for review. These conditions are imposed to ensure that temporary stream and wetland crossings have no significant adverse impact to aquatic resources and are imposed under the authority of the Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3.2 (2016) and Antidegradation Implementation Procedures, W. Va. Code R. § 60-5-1, *et seq.* (2008).

26. The Stream and Wetland Mitigation Framework shall be followed. The Stream and Wetland Mitigation Framework provides supplemental assurance of compliance with water quality standards. This Condition is imposed pursuant to Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3.2 (2016) and Antidegradation Implementation Procedures, W. Va. Code R. § 60-5-1, *et seq.* (2008).

27. To compensate for the loss of aquatic functions associated with the conversion of PFO and PSS wetland resources to PEM, MVP is to provide evidence of SWVM credit purchase from an approved mitigation bank or in-lieu fee program to WVDEP-DWWM. Wetland conversion impacts from the proposed activity will require the purchase of 1.7503 SWVM wetland credits from a mitigation bank or 3.5006 SWVM wetland credits from an in-lieu fee program or a combination of credits from a mitigation bank or in-lieu fee program. Based on future review of reports required by the Stream and Wetland Mitigation Framework, additional restoration and/or mitigation may be required. This condition is required in accordance with the West Virginia Water Pollution Control Act, W.Va. Code § 22-11-1, et seq. (2014), Antidegradation Implementation Procedures, W. Va. Code R. § 60-5-1, *et seq.* (2008), Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3 (2016), Rules for Individual State Certification of Activities Requiring a Federal Permit, W. Va. Code R. § 47-5A-6.2 (2014), and Compensatory Mitigation for Losses of Aquatic Resources; Final Rule, 33 C.F.R. § 332 (2008).

28. Only open bottom box culverts or solid box culverts, which are countersunk to maintain substrate in the bottom, are to be used for permanent access roads that cross trout streams. This condition is required in accordance with the Rules for Individual State Certification of Activities Requiring a Federal Permit, W. Va. Code R. § 47-5A-3.1 (2014), Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-1, *et seq.* (2016), Possession of Wildlife, W. Va. Code R. § 20-2-4 (2017) and Fishing Regulations W. Va. Code R. § 58-60-5.11 (2020).

29. To prevent unnecessary impact of aquatic resources at points of ingress and egress, equipment is to disturb aquatic resources no more than is necessary to accommodate proper

construction and operation in accordance with Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3.2 (2016).

30. To ensure the permanent impacts to aquatic resources are mitigated, MVP is to provide evidence of SWVM credit purchase from an approved mitigation bank or in-lieu fee program to WVDEP-DWWM. A total of 759 SWVM stream credits are required if purchased from a mitigation bank. Permanent wetland impacts from the proposed activity will require the purchase of 0.4458 SWVM wetland credits from a mitigation bank or 1.0080 SWVM wetland credits from an in-lieu fee program. This condition is required in accordance with; Antidegradation Implementation Procedures, W. Va. Code R. § 60-5-1, *et seq*. (2008), Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3 (2016), WV Water Pollution Control Act, W.Va. Code § 22-11-1, *et seq*. (2014), Rules for Individual State Certification of Activities Requiring a Federal Permit, W. Va. Code R. § 47-5A-6.2 (2014), and Compensatory Mitigation for Losses of Aquatic Resources; Final Rule, 33 C.F.R. § 332 (2008).

31. To ensure the temporary impacts to aquatic resources are mitigated in accordance with state water quality requirements and the Stream and Wetland Mitigation Framework, MVP is to provide evidence of SWVM credit purchase from an approved mitigation bank or in-lieu fee program to WVDEP-DWWM. A total of 480.58 SWVM stream credits are required if purchased from a mitigation bank. For temporary wetland impacts a total of 0.876 SWVM wetland credits are required if purchased from a mitigation bank. Based on future review of monitoring reports, provided in accordance with the Stream and Wetland Mitigation Framework, additional restoration and/or mitigation may be required for temporary impacts to aquatic resources. This condition is required in accordance with the West Virginia Water Pollution Control Act, W. Va. Code § 22-11-1, *et seq*. (2014), Antidegradation Implementation Procedures, W. Va. Code R. § 60-5-1, *et seq*. (2008), Requirements Governing Water Quality Standards, W. Va. Code R. § 47-2-3 (2016), Rules for Individual State Certification of Activities Requiring a Federal Permit, W. Va. Code R. § 47-5A-6.2 (2014), and Compensatory Mitigation for Losses of Aquatic Resources; Final Rule, 33 C.F.R. § 332 (2008).

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ATTACHMENT B

Burge, L., Guthrie, R., and Chaput-Desrochers, L. 2014. Hydrological factors affecting spatial and temporal fate of sediment in association with stream crossings of the Mackenzie Gas Pipeline. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/029. v + 35 p.

Lévesque, L.M. and M.G. Dubé. 2007. Review of the effects of in-stream pipeline crossing construction on aquatic ecosystems and examination of the Canadian methodologies for effect assessment. Environmental Monitoring and Assessment 132:395-409.

Moyer, D.L. and K.E. Hyer. 2009. Continuous turbidity monitoring in the Indian Creek watershed, Tazewell County, Virginia, 2006–08. U.S. Geological Survey, Reston, V.A.

Penkal, R.F. and G.R. Phillips. 1984. Construction and operation of oil and gas pipelines. Fisheries 9(3):6-8.

Reid, S.M., and Anderson, P.G. 1999. Effects of sediment released during open-cut pipeline water crossings. Can. Water Resour. J. 24: 235–251.

Reid, S., & Anderson, P. G. 2000. Evaluation of isolated watercourse crossings during winter construction along the Alliance pipeline in northern Alberta. In Proceedings of the 7th International Symposium, Environmental Concerns in Right-of-Way Management, Calgary, AB.

Reid, S., S. Stoklosar, S. Metikosh, J. Evans, and T. Huffman. 2002a. Effects of Natural Gas Pipeline Water Crossing Replacement on the Benthic Invertebrate and Fish Communities of Big Darby Creek, Ohio. Environmental Concerns in Rights-of-Way Management: Seventh International Symposium: 717-723.

Reid, S.M., S. Stoklosar, S. Metikosh and J. Evans. 2002b. Effectiveness of isolated pipeline crossing techniques to mitigate sediment impacts on Brook Trout streams. Water Quality Research Journal of Canada 37(2):473-488.

Reid, S., F. Ade, and S. Metikosh, S. 2004. Sediment entrainment during pipeline water crossing construction: predictive models and crossing method comparison. Journal of Environmental Engineering and Science 2004 3:2, 81-88

Reid, S.M., S. Metikosh and J.M. Evans. 2008. Overview of the river and stream crossings study. Pages 711-721 in Elsevier, ed. Proceedings of the symposium at the 8th international symposium of environment concerns in rights-of-way management; Saratoga Springs, NY.

Yu et al., Effects of Pipeline Construction on Wetland Ecosystems: Russia-China Oil Pipeline Project (Mohe-Daqing Section), 39 Ambio 447 (2010).

ATTACHMENT C

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT
SECTION 401 WATER QUALITY CERTIFICATION PROGRAM
MOUNTAIN VALLEY PIPELINE PROJECT
PUBLIC NOTICE, HEARING, AND COMMENT

On May 7, 2021, the West Virginia Department of Environmental Protection's Division of Water & Waste Management ("WVDEP-DWWM" or "WVDEP") commenced a 47-day public comment period and held a public hearing on June 22, 2021 to accept written and oral comments relating to the issuance of a § 401 Water Quality Certification ("WQC" or "Certification") applicable to the Mountain Valley Pipeline Project ("MVP" or "the Project").

The following sections are included:

I. Summary of Notices to Public
II. Overview of Written and Oral Comments
III. WVDEP Responses to Comments

I. Summary of Notices to Public

Mountain Valley Pipeline provided a Public Notice for the §401 Water Quality Certification application and associated public hearing in a Class 1 legal advertisement in Braxton, Doddridge, Fayette, Greenbrier, Harrison, Lewis, Monroe, Nicholas, Summers, Webster, and Wetzel Counties, West Virginia in accordance with the requirements of the Rules for Individual State Certification of Activities Requiring a Federal Permit, W. Va. Code R. § 47-5A-5 (2014).

The public was provided public notice of the §401 WQC application and public hearing for the MVP Project by the WVDEP via publication on the WVDEP public listserv. All notices provided the required information identified in West Virginia Code of State Rules § 47-5A-5. The comment period remained open until June 22, 2021 at the end of the public hearing, which was held live via digital Zoom platform.

II. Overview of Written and Oral Comments

Written comments were accepted from May 7, 2021 until the close of the public hearing. Four-hundred-six written comments were provided by mail and email to the Water Quality Certification program staff.[1] Oral comments were accepted at a public hearing held via Zoom meeting on June 22, 2021, from 6:00-8:00 p.m. Twenty-five people attended, and 22 spoke at the hearing. Written comments were also accepted. A total of 428 comments were received during the public comment period.[2]

[1] Among these, 302 commenters submitted identical comment letters. An additional 59 commenters submitted identical comments with some variations. These comments are referred to collectively herein as "the form comment."
[2] Three comments were reviewed after the comment period ended. One was another instance of the form comment. The remaining two consisted of a letter discussing climate-related issues extraneous to Section 401 review, and a response to that letter. Whether these comments are deemed accepted or not would not alter WVDEP's conclusion on any issue discussed herein.

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The WVDEP is grateful to every person and organization who participated in the public notice process. Public involvement in this process is invaluable because water quality is a concern for everyone who lives, works, and plays in West Virginia. The WVDEP thanks you for providing your views and concerns on this very important subject. Specific responses to comments may be found below.

III. Comments and WVDEP Responses

Comment: Appalachian Mountain Advocates (AMA) and other commenters raised concerns regarding "Mountain Valley Pipelines proposed discharges compliance with WV WQS (Water Quality Standards)" and suggested the "alternatives are not the least environmentally degrading practicable alternatives required by West Virginia's antidegradation policy."

WVDEP Response: West Virginia's antidegradation policy only requires an analysis of alternatives if the WVDEP determines that a proposed discharge will result in "significant degradation" of water quality in a Tier 2 stream. *See* W. Va. Code R. § 60-5-5.7. Nonetheless, MVP has conducted a detailed site-specific review of practicable alternatives to open cut crossings for the USACE which was cross-referenced in its Request for Section 401 certification. See MVP Request for Section 401 Certification, p. 4 (citing section 3 of individual permit application to USACE). WVDEP participated in discussions with MVP and the USACE concerning the practicability of trenchless crossings and believes the analysis performed by MVP is reasonable.

As for the protection of water quality, the information provided by MVP as part of its §401 Water Quality Certification (Certification) request, which included the Stream and Wetland Restoration, Monitoring, and Mitigation Framework (Mitigation Framework), WVDEP Oil and Gas Construction Stormwater Permit (O&G CGP) Stormwater Pollution and Prevention Plan (SWPPP), use of advanced erosion and sediment control BMPs, and restoration plans for in-stream construction areas, ensures the maintenance of the designated uses and compliance with West Virginia's water quality requirements. West Virginia's Water Quality Standards (WQS) are comprised of designated uses to be protected and the water quality criteria required to maintain those uses as identified in W. Va. Code R. § 47-2-2.20 & 2.21. Water quality criteria established to protect the designated uses of state waters may be numeric or narrative. The WVDEP narrative WQS require that no wastes present in any of the waters of the State shall cause therein or materially contribute to any other condition which adversely alters the integrity of the waters of the State and disallows significant adverse impact to the chemical, physical, hydrologic, or biological components of aquatic ecosystems. W. Va. Code R. § 47-2-3.2. The WVDEP does not have a numeric criterion for total suspended solids, which measures the concentration of suspended sediment or material in a sample, but does have a numeric criterion for turbidity, which measures the light-scattering properties of a sample in nephelometric turbidity units and serves as a representative parameter for TSS in the field. The WQS for turbidity is expressed as a maximum allowable net increase in turbidity, as measured immediately upstream and downstream of a discharge. W. Va. Code R. § 47-2-8.1, App. E, Table 1 (8.33). The allowable increase differs depending on the upstream turbidity level at the time that discharge occurs, which accounts for the natural background condition of the receiving water.

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Uncontrolled discharges from instream activities may contribute to some of the conditions listed in the narrative criteria, including settleable solids, suspended solids, and sediment deposits and may result in direct and/or indirect effects on aquatic life and aquatic habitats as well as violation of the numeric turbidity criteria. The advanced BMPs proposed in the SWPPP were determined by USEPA in 2012 to ensure, "stormwater discharges being controlled as necessary to meet applicable water quality standards (which include state antidegradation requirements)." The Virginia Department of Environmental Quality (DEQ) also relied on the USEPA's conclusion in the issuance of its own construction general permit indicating that the DEQ "traditionally relies on the technical studies and analysis of USEPA." Without information demonstrating otherwise the WVDEP relies on compliance with the requirements of the O&G CGP to control discharges from construction activities as necessary to meet the applicable water quality standards and antidegradation requirements. This is evident as well because the O&G CGP imposes more stringent BMP requirements for activities that discharge to impaired streams (Tier 1) and exceptional waters of the State. These requirements include additional stabilization measures and increased inspection frequency. The WVDEP has also applied conditions to the proposed Project in the foregoing Certification and requires compliance with the O&G CGP to control discharges of sediment and other pollutants that may be entrained with sediment so that discharges from the Project will comply with West Virginia's numeric and narrative water quality criteria. The WVDEP has determined that antidegradation requirements are satisfied because compliance with the requirements set forth by the O&G CGP and Certification will not result in a lowering of water quality, making individualized antidegradation review unnecessary.

As discussed in the Certification request, Mountain Valley engaged in a robust alternatives analysis review process to avoid and minimize the Project's aquatic impacts to the extent practicable. In sum, MVP undertook a comprehensive alternatives analysis that included, but was not limited to, several major route alternatives (and offsite and nonstructural alternatives), hundreds of route adjustments and refinements, and onsite avoidance measures (e.g., crossing method alternatives). For this linear project the approach utilized is appropriately suited for complying with the intent of a Certification alternatives analysis. Through this process, MVP has demonstrated the selected route was the least environmentally damaging alternative for the proposed activity and resulted in 30% of the remaining crossing being conducted using trenchless crossing methods.

In addition, MVP proposes to use trenchless construction methods at 120 locations to cross 183 streams and wetlands across the Project, rather than the open-cut construction methods originally authorized by FERC in the certificate of public convenience and necessity it issued to MVP in October 2017 under the Natural Gas Act. *See* FERC Environmental Assessment at p. 1, Accession No. 20210813-3009 in Docket No. CP21-57-000. If approved by FERC, this change in crossing methods will further reduce impacts to surface waters. *Id.* at p. 33. In West Virginia, MVP proposes the use of 38 bores that will pass beneath 57 aquatic resources, including three Section 10 navigable waters.

Comment: AMA and other commenters propose that "Mountain Valley Pipeline cannot establish that any trenchless crossings are impracticable from the standpoint of cost."

WVDEP Response: As stated in the previous response, West Virginia's antidegradation policy does not require a review of alternatives unless the WVDEP makes a finding that the proposed discharge will result in a significant deterioration of a Tier 2 water. W. Va. Code R. § 60-5-5.7. As discussed in the Certification and in response to other comments, the WVDEP has found that the Project will not result in any significant degradation of the State's waters. Therefore, under the WVDEP's rules, MVP is not required to demonstrate that trenchless crossings are impracticable. To satisfy the USACE's regulatory requirements, however, MVP performed site-specific analyses of every crossing along the proposed route. This analysis considered many factors, including costs, constructability, and the aquatic resources present at each site. A detailed description of its analysis appears in MVP's Response to USACE's August 30, 2021 Request for Information, Attachment 6, which was submitted to the WVDEP as well. The WVDEP believes that analysis reasonably determined where trenchless crossings were impracticable.

Additionally, there are many circumstances under which crossings cannot be practicably completed utilizing a trenchless method. In particular, the analysis showed that trenchless crossing methods often are impracticable in difficult terrain, including on steep slopes and in areas with karst geology.

Comment: AMA and other commenters propose that, "Mountain Valley Pipeline understates the impacts on water quality, aquatic life and aquatic ecosystems from dry-ditch, open-cut crossings. Various studies have documented adverse effects to the benthic community that have been apparent for between six months and four years post-construction."

WVDEP Response: As identified in the previous agency response regarding water quality and aquatic life, aquatic resources will be protected through the implementation of the requirements set forth in the WV O&G CGP and project specific SWPPP, as well as the conditions of the attached Certification. The WVDEP reviewed literature sources provided by commenters and others. Specifically, WVDEP reviewed the following studies submitted by Appalachian Mountain Advocates (AMA):

Lévesque, L.M. and M.G. Dubé. 2007. Review of the effects of in-stream pipeline crossing construction on aquatic ecosystems and examination of the Canadian methodologies for effect assessment. Environmental Monitoring and Assessment 132:395-409. *See* AMA Comments, Ex. 24.

Penkal, R.F. and G.R. Phillips. 1984. Construction and operation of oil and gas pipelines. Fisheries 9(3):6-8. *See id.*, Ex. 23.

Reid, S.M., and Anderson, P.G. 1999. Effects of sediment released during open-cut pipeline water crossings. Can. Water Resour. J. 24: 235–251. *See id.*, Ex. 19.

Reid, S.M., F. Ade and S. Metikosh. 2004. Sediment entrainment during pipeline water crossing construction: predictive models and crossing method comparison. Journal of Environmental Engineering and Science 3:81-88. *See id.*, Ex. 18.

Yu et al., Effects of Pipeline Construction on Wetland Ecosystems: Russia-China Oil Pipeline Project (Mohe-Daqing Section), 39 Ambio 447 (2010). *See id.*, Ex. 26.

In addition, WVDEP reviewed the following studies submitted by MVP:

Burge, L., Guthrie, R., and Chaput-Desrochers, L. 2014. Hydrological factors affecting spatial and temporal fate of sediment in association with stream crossings of the Mackenzie Gas Pipeline. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/029. v + 35 p. *See* Attachment 6-8 of MVP's Response to Corps' Aug. 30, 2021 Request for Information.

Moyer, D.L., and Hyer, K.E. 2009. Continuous Turbidity Monitoring in the Indian Creek Watershed, Tazewell County, Virginia, 2006–08: U.S. Geological Survey Scientific Investigations Report 2009–5085. 42 p. *See id.*, Attachment 6-7.

Reid, S., & Anderson, P. G. (2000). Evaluation of isolated watercourse crossings during winter construction along the Alliance pipeline in northern Alberta. In Proceedings of the 7th International Symposium, Environmental Concerns in Right-of-Way Management, Calgary, AB. *See id.*, Attachment 6-14.

Reid, S., S. Stoklosar, S. Metikosh, J. Evans, and T. Huffman. 2002a. Effects of Natural Gas Pipeline Water Crossing Replacement on the Benthic Invertebrate and Fish Communities of Big Darby Creek, Ohio. Environmental Concerns in Rights-of-Way Management: Seventh International Symposium: 717-723. *See id.*, Attachment 6-9.

Reid, S.M., S. Stoklosar, S. Metikosh and J. Evans. 2002b. Effectiveness of isolated pipeline crossing techniques to mitigate sediment impacts on Brook Trout streams. Water Quality Research Journal of Canada 37(2):473-488. *See id.*, Attachment 6-10.

Reid, S.M., S. Metikosh and J.M. Evans. 2008. Overview of the river and stream crossings study. Pages 711-721 in Elsevier, ed. Proceedings of the symposium at the 8th international symposium of environment concerns in rights-of-way management; Saratoga Springs, NY. *See id.*, Attachment 6-11.

After reviewing the relevant literature, WVDEP concludes that any potential impacts from construction of the proposed dry-ditch, open-cut crossings will be temporary and minimal compared to increased turbidity associated with natural runoff events, as indicated by the U.S. Geological Survey (Moyer and Hyer 2009).

WVDEP also previously reviewed similar materials on the impact of dry-ditch, open-cut pipeline crossings in the past during §401 WQC review of the Nationwide Permits (NWP) and references its Comment Response for Modification of 401 Certification of U.S. Army Corps of Engineers §404 NWPs, State of West Virginia (April 24, 2019). As part of the review and response to comments process the WVDEP reviewed studies and literature on the effects of "dry" cut crossing techniques in which trenching is conducted in stream areas from which water has been excluded. As noted in WVDEP's 2019 response to public comments, those studies supported the conclusion that large increases in downstream sediment concentrations were rare when dry-cut

crossing techniques were utilized (Reid et. al. 2004, Reid et. al. 2002). Additional discussion from some of the relevant literature follows.

One study compared the effectiveness of "wet" open cuts to dry open cuts. *See* Effectiveness of Isolated Pipeline Crossing Techniques to Mitigate Sediment Impacts on Brook Trout Streams, (Reid et al. 2002). It identified that, "conventional (wet) water-crossing methods requiring trench excavation in the active stream flow can release substantial quantities of sediment into the water column as a result of instream construction." The findings of the study determined, "increases to mean downstream TSS (total suspended solids) concentrations during dam and pump or flume crossings [which are dry cut techniques] were at least seven times lower" than with "(wet) open cuts." For that reason, the WVDEP requires the use of isolation techniques because they were determined to be "highly effective at limiting sediment release during pipeline construction across brook trout streams and, therefore, associated risks to fish and fish habitat." The use of workspace isolation BMPs required under the O&G CGP and the Certification "can be very effective at: (1) minimizing increases to downstream suspended sediment concentrations during instream construction; and (2) preventing sediment-induced effects on habitat and fish abundance downstream of pipeline water crossings." Further supported in the research are findings that, "for sensitive watercourses, isolated crossing techniques are an effective alternative to trenchless crossing techniques (e.g., horizontal directional drilling)." (Reid et al. 2002) (p. 473).

The United States Geological Survey ("USGS") examined the use of boring and dry-cut crossing techniques in Tazewell County, Virginia. (Moyer, et. al. 2009). The USGS utilized continuous paired upstream and downstream turbidity monitors over a two-year period for two stream crossings—one of Indian Creek using horizontal directional drilling (HDD) under the stream and one of an unnamed tributary using a dry cut (dam and flume) crossing method, which is a BMP methodology proposed for implementation as part of the O&G CGP. As for the dry open cut, the study found that "turbidity conditions in the unnamed tributary were not adversely altered during the construction of the pipeline crossing." USGS, p. 32. The USGS noted that turbidity values "downstream from the pipeline crossing were measurably elevated for short durations during active pipeline-crossing construction, August 4-6, 2006; however the sediment generated during this period, as indicated by the increase in turbidity, was substantially lower than the turbidity levels that are generated during typical runoff events." USGS, p. 26. In addition, notwithstanding the short-term increases during the three days of construction, the, "turbidity values measured during the construction period were generally less than those measured during the pre- and post- construction phases." USGS, p. 15. Further, the "long-term patterns in turbidity, collected during the construction phase, indicated that turbidity significantly decreased downstream from the pipeline crossing." USGS p. 26. Finally, the median post-construction turbidity values at up- and downstream sampling sites were the same ("the median post-construction paired difference was 0.0 FNU for the unnamed tributaries"). USGS, p. 23.Although there were some turbidity increases in the unnamed tributary, "the increase in turbidity values was shown to be minimal compared to the turbidity values obtained during natural runoff events."

As a result of these analyses, WVDEP determines that discharges associated with MVP's proposed waterbody crossings are short-term activities and that will have minimal and temporary impacts. This supports the WVDEP's position that aquatic resources are not degraded during implementation of the proposed activity when complying with the O&G CGP and Certification.

MVP will also implement the monitoring requirements identified in the Mitigation Framework for comparison to baseline conditions. This information will be provided to the WVDEP for review and consideration for a period of 3 years post construction. If degradation is identified, then MVP will be responsible for remediating any issues consistent with the language and requirements identified in the Mitigation Framework and the attached Certification. If adaptive management strategies are required to address impacts, then MVP will submit them to WVDEP prior to commencing their use.

Comment: AMA and other commenters express concern that, "MVPs stream crossings will cause or contribute to violations of West Virginia's Antidegradation Policy...the antidegradation policy prohibits any further degradation when a stream is already impaired."

WVDEP Response: The Antidegradation Implementation Procedures in West Virginia Code of State Rules § 60-5-1, *et seq.* require protection of all waters of the state and provide that, "the level of review required will depend on the existing uses of the water segment that would be affected, the level of protection ("tier") assigned to the applicable water segment, the nature of the activity, and the extent to which existing water quality would be degraded." W. Va. Code R. § 60-5-1.5.a. The following describes the three levels or "Tiers" of protections required by West Virginia's antidegradation policy.

Tier 1 protection applies to all waters of the state. W. Va. Code R. §§ 47-2-4.1.a and 60-5-4.2. Under Tier 1 antidegradation review, WVDEP determines whether the receiving water for a proposed discharge is meeting existing uses. W. Va. C.S.R. § 60-5-4.3; 40 C.F.R. § 131.12(a)(1). If the aquatic resource is on the State's CWA §303(d) list of impaired waters, no lowering of water quality is allowed with respect to the parameter that is causing the impairment. W. Va. Code R. §§ 60-5-4.5 & 4.7. As noted, the parameter of concern associated with MVP's proposed activities is sediment. In biologically impaired streams where sedimentation is identified as a contributing stressor or in streams where reductions in sediment are required to attain iron water quality standards, WVDEP has developed iron Total Maximum Daily Loads ("TMDLs"). These USEPA-approved TMDLs include allowances for future growth and incorporate in the model and calculation of the TMDL that discharges of sediment associated with construction and development activity will take place. Thus, West Virginia's antidegradation policy does not prohibit new construction-related discharges of sediment to sediment-impaired streams if such discharges are authorized by and compliant with an applicable TMDL. In October 2017, as part of its O&G CGP registration, MVP submitted a TMDL Watershed Analysis to WVDEP demonstrating how it would maintain compliance in watersheds where TMDLs have been established, which was reviewed and approved by WVDEP as consistent with the applicable TMDLs. MVP's SWPPP under the O&G CGP requires implementation of advanced erosion and sediment controls in these TMDL watersheds, and WVDEP has found that this will ensure that water quality standards are maintained in sediment-impaired streams.

Tier 2 protection applies to all waters of the state where the water quality exceeds levels necessary to support existing uses. W. Va. Code R. §§ 47-2-4.1.b and 60-5-5.1. Tier 2 antidegradation review is required when a proposed discharge would "significantly degrade water quality." W. Va. Code R. § 60-5-5.6. If the activity would reduce the receiving water's "assimilative capacity" by "ten percent or more at the appropriate critical flow condition(s) for

parameters of concern," degradation will be considered "significant." W. Va. Code R. § 60-5-5.6.c. WVDEP may allow significant degradation of a Tier 2 water if it finds, after an analysis of alternatives, that the proposed activity "is necessary to accommodate important economic or social development in the area." W. Va. Code R. §§ 47-2-4.1.b and 60-5-5.8.a; 40 C.F.R. § 131.12(a)(2)(ii).

Tier 3, the highest level of protection, applies to waters designated as "outstanding national resource waters." W. Va. Code R. §§ 47-2-4.1.c & 60-5-6.1.9. Under Tier 3 antidegradation review, any proposed activity that would result in a lowering of water quality is prohibited, except that a temporary lowering of water quality, is allowed. W. Va. Code R. § 60-5-6.1. If the proposed activity is short-term and its water quality impacts would be temporary, the discharge will be allowed. W. Va. Code R. § 60-5-6.2. Since a temporary lowering of water quality is allowed in the highest quality waters of the State, the WVDEP interprets the State's Antidegredation Policy as also allowing short-term, temporary lowering of water quality in Tier 1 and Tier 2 waters. *See also Sierra Club v. State Water Control Bd.* 898 F.3d 383, 405 n. 15 (4th Cir. 2018) (noting Virginia's similar interpretation of its antidegradation policy).

As indicated in the Certification request MVP proposes to utilize erosion and sediment control BMPs and restoration plans to effectively control discharges of sediment and other pollutants that may be entrained with sediment. This methodology was also employed by Virginia DEQ and was affirmed by the United States Court of Appeals for the Fourth Circuit in 2019 when it held, "State Agencies did not have to conduct a separate antidegradation review because the impact of sediment on the water would only be temporary. Even in the most protected state waters, Virginia does not consider temporary sources of pollution, such as the construction of the [Atlantic Coast Pipeline], to violate antidegradation policies." *Appalachian Voices v. State Water Control Bd.*, 912 F.3d 746, 758 (4th Cir. 2019). That Court has also held that Tier 2 antidegradation review does not require a socioeconomic analysis before approving discharges that will have minor, temporary water quality impacts. *Sierra Club v. State Water Control Bd.* 898 F.3d 383, 405-06 (4th Cir. 2018). By complying with the WV O&G CGP and implementing the proposed SWPPP, MVP will control discharges from the Project to ensure appropriate protection of aquatic resources and prevent any degradation of State waters and will therefore comply with the State's antidegradation policy for all three tiers of protection.

The WVDEP's approach to controlling the discharge of sediment to the stream through the use of BMPs follows the same path as the USEPA's CGP, which relies primarily on BMPs to control the discharge of sediment or for sediment related parameters. When issuing the O&G CGP the WVDEP carefully reviewed each Tier of aquatic resources and the antidegradation requirements to determine the BMPs most appropriate to protect water quality for each of the given Tiers. The USEPA identifies in Section 3.1 of the 2017 CGP that they expect, "compliance with the conditions in this permit will result in stormwater discharges being controlled as necessary to meet applicable water quality standards." This was done by following USEPA's approach of compliance with antidegradation requirements by implementing enhanced BMPs and increased inspection. Further, like USEPA's CGP, WVDEP's O&G CGP is not static – it assumes and requires that registrants will adapt and adopt changes to their controls as field and environmental conditions warrant. See O&G CGP, § G.4.c. and WVDEP Stormwater Construction General Permit Modification Policy.

Comment: AMA indicates that, "Mountain Valley relies on those TOYRs when describing how water withdrawals will comply with applicable state guidance; how it will minimize impacts from construction on sensitive stream resources like trout waters, spawning areas, and freshwater mussels; how its effects on fish, crustaceans, mollusks, and other aquatic organisms in the food web should be evaluated; how its impacts on recreational and commercial fisheries...."

WVDEP Response: The use of time of year restrictions ("TOYR") is an appropriate mechanism to ensure water availability, protection of spawning fish species, and protection of other aquatic organisms. MVP proposes to utilize the WVDEP Water Withdrawal Guidance tool to ensure water availability for wildlife, recreational activities, and downstream users. This tool provides water withdrawal guidance to a variety of industrial user groups and is appropriate for use by MVP for water withdrawals since it considers the necessary base flow requirements to ensure protection of aquatic life and designated uses. The impact of waiving any specific TOYR will be evaluated at the time such waiver is sought.

Comment: AMA and other commenters raise concerns because they believe "restoration efforts are generally successful only in a limited sense, many of the impacts to wetlands, streams, and streambanks that Mountain Valley deems 'temporary' due to restoration efforts are more likely to be long-term or permanent even if Mountain Valley follows through with the restoration plans included in its application." AMA also states that, "Mountain Valley does not mention in its individual permit application any plans to perform baseline surveys or monitoring of the areas to be restored."

WVDEP Response: The WVDEP, in conjunction with the USACE and USEPA, requested that MVP develop a plan to address temporary impact baseline documentation and restoration. MVP provided the previously referenced Mitigation Framework, which includes assessment and monitoring of pre-crossing conditions; performance standards for achievement of successful stream and wetland restoration; post-construction stream and wetland monitoring; a maintenance plan and an adaptive management plan; as well as supplemental mitigation requirements to ensure that all temporary impacts are restored appropriately or mitigated if a permanent loss of function is determined to have occurred by WVDEP. MVP completed additional baseline assessments to document the pre-crossing conditions at each proposed stream and wetland crossing and provided this information to WVDEP in November 2021. The WVDEP also references the previous response to Appalachian Mountain Advocates regarding the rationale for using enhanced BMPs outlined in the O&G CGP, SWPPP, and Certification to ensure temporary crossings do not result in degradation of the designated uses of a waterbody and compliance with the State's WQS.

Comment: AMA and other commenters raise the following concerns, "Where a proposed activity would cause significant degradation to Tier 2 streams, ... WVDEP can only certify it as compliant with West Virginia's antidegradation policy where that degradation is "necessary to accommodate important economic or social development in the area in which the waters are located." In conducting its review of the socio-economic importance of a particular activity, WVDEP must consider, inter alia, the environmental impacts that may result from the proposed

activity, facts pertaining to the economic development in the area, and land use in the affected area."

WVDEP Response: Tier 2 protection applies to all waters of the state where the water quality exceeds levels necessary to support existing uses and review is required when a proposed discharge would "significantly degrade water quality." W. Va. Code R. § 60-5-5.6. The proposed activities' temporary impacts are not considered significant in nature and therefore do not require the commenters' proposed additional level of antidegradation review. The USEPA supports this approach in its 2012 CGP Fact Sheet, § VIII.3.2 citing, compliance with the CGP "will result in stormwater discharges being controlled as necessary to meet applicable water quality standards (which include state antidegradation requirements)." USEPA made the same findings when it reissued the CGP in 2017 (see discussion below). The requirements of the WVDEP's O&G CGP, MVP's Registration No. WVR310667, and the Certification are equivalent if not more stringent than those imposed by the USEPA and will protect water quality and the designated uses of the waters of the State. Thus, compliance with the aforementioned requirements and the additional requirements of the project specific SWPPP are sufficient to satisfy Tier 2 antidegradation requirement and exceed the USEPA's required sediment controls to satisfy Tier 3 antidegradation. For these reasons the WVDEP has found that the implementation of the requirements outlined in the O&G CGP, SWPPP, and this Certification are sufficient to prevent a lowering of water quality, rendering individualized Tier 2 and Tier 3 review unnecessary.

Comment: AMA and other commenters raise concerns regarding, "the company's application appears to omit waterbodies that are likely to be affected by discharges of dredge or fill material."

WVDEP Response: The WVDEP conducted a due diligence analysis of the 2020 National Hydrography Dataset (NHD) for any aquatic resources that may be impacted by the project and were not identified in the Certification request. This analysis revealed 45 locations in which WVDEP requested clarification from MVP regarding potential impacts to aquatic resources not identified in the Certification request. It was determined after a review of the subject areas that many of the NHD streamline crossings were; existing culverts not installed by MVP; streams that are avoided or spanned with no placement of fill in the ordinary high water mark; areas where the NHD line is not accurate and does not cross the project; or resources that will be crossed using a trenchless method (i.e. bored). It was also identified that some portions of the construction plans needed to be updated to include clarification of two crossings of S-J70 along access road MVP-BR-096 spanning bank to bank with no impact. The streams identified as ID-11 (Slabcamp Run), ID-339 (UNT to Houston Run), and ID-340 (UNT to Houston Run) will not be impacted because these access roads were not constructed and will not be part of the project in the future. A justification and remedies were provided for all 45 areas in question and revised impact tables were provided to the WVDEP.

Comment: West Virginia Rivers Coalition (Rivers) states the following, "DEP cannot complete the anti-degradation review without adequate baseline monitoring data. MVP must be required to conduct turbidity monitoring on all streams potentially impacted by construction. Failure to do so violates the provisions of the Clean Water Act."

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WVDEP Response: This is a complex issue. The antidegradation implementation rule provides that "[t]he level of review required will depend on the existing uses of the water segment that would be affected, the level of protection ("tier") assigned to the applicable water segment, the nature of the activity, and the extent to which existing water quality would be degraded." W. Va. Code R. § 60-5-1.5.a. As the commenter notes, WVDEP's antidegradation implementation procedures rule generally contemplates the collection of baseline water quality data for the purposes of conducting an antidegradation analysis. For non-precipitation induced point source discharges of wastewater, the rule contemplates the collection of baseline concentrations of substances for which there is a water quality criterion that could be affected by the discharge. Then, using the maximum permitted or average design flows of the wastewater treatment system and the projected concentrations of pollutants in those discharges, WVDEP calculates the impact of the discharge on the concentrations of the target pollutant in the receiving water during low-flow conditions. W. Va. Code R. § 60-5.6.c (describing Tier 2 antidegradation process for non-precipitation induced discharges). But that type of analysis is not prescribed or appropriate for highly variable flows of stormwater or for discharges of "dredged or fill" material. Here, most of the discharges of dredged or fill material will consist of work to isolate crossing areas from water and replacing streambed and wetland material after it is excavated for the pipeline trench. The replacement of streambed material is proposed to occur only after the work area is isolated from the surrounding water. In that case, the "discharge" itself has little to no impacts on water quality at the time of discharge because the area is dry. Only when water is restored to the work area is there a significant chance that the replaced material becomes waterborne. Unlike the loading analysis specified in the rule for evaluating discharges of non-precipitation induced wastewater discharges, though, there is no required or readily performable method for predicting the effect of stormwater or filling activities on the concentrations of pollutants in surrounding waters, especially in the highly variable flow conditions that permittees encounter.

West Virginia does not have a numeric criterion for total suspended solids, which measures the concentration of suspended material in a sample. It does have a numeric criterion for turbidity, which measures the light-scattering properties of a sample in nephelometric turbidity units. West Virginia's turbidity standard is expressed as a maximum allowable net increase in turbidity, as measured immediately upstream and downstream of a discharge. W. Va. Code R. § 47-2-8.1, App. E, Table 1 (8.33). The allowable increase differs depending on the upstream turbidity level at the time the discharge occurs. As a result, collecting pre-construction turbidity data in affected streams would not provide the information necessary to evaluate the potential impacts of future discharges on the turbidity criterion.

For these reasons, section 1.5.d of WVDEP's antidegradation procedures contemplates the use of "information contained within existing environmental processes and reviews....facilities plans...and findings of no significant impact....to provide part or all of the requirements of the antidegradation review process." W. Va. Code R. § 1.5.d. Here, the WVDEP has turned first to USEPA and its construction stormwater permit, which is designed to control erosion and sedimentation from construction activities. On five-year cycles, USEPA has issued a General Permit to control sediment from construction sites. That permit does not impose numeric effluent limits on stormwater discharges, in part because USEPA did not want to force permittees to route the water to impoundments (where flows and concentrations in discharges from the impoundments

could be measured.[3] Instead, it relies on distributed engineering controls and an iterative inspection and adaptation process. In 2012 and again in 2017 USEPA established baseline controls and processes known as "best management practices" (BMPs) to control erosion and sedimentation.[4] These include structural controls to prevent and/or reduce erosion and sedimentation (such as rock check dams, silt fences, or sediment basins) and operational requirements, including inspection and maintenance of structural controls and stabilization of disturbed areas. For what USEPA terms "sensitive waters" (Tiers 2, 3, and sediment-impaired waters), USEPA calls for the use of "enhanced" BMPs, which consist of more frequent site inspections and more rapid soil stabilization practices. Where these practices are used, USEPA has determined there will be no lowering of water quality and discharges thereby satisfy all tiers of antidegradation review, "making individual Tier 2 or Tier 3 review unnecessary.[5] USEPA has proposed to re-issue its CGP in 2022 with similar provisions. *See* USEPA Proposed 2022 Construction General Permit—Fact Sheet, p.23.[6]

The WVDEP has adopted a nearly identical general permit for the oil and gas industry for which it also relies on Section 1.5.d of the antidegradation rule to make the necessary demonstration of compliance. See WVDEP's 2013 O&G CGP (No. WV0116815). Under the

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[3] *See* 73 Fed. Reg. 72,562, 72,572 (Nov. 28, 2008). USEPA has issued both Effluent Limitations Guidelines and New Source Performance Standards for Construction and Development as well as a general permit for achieving compliance with both those standards and water quality standards. At one time, its Effluent Limitations Guidelines prescribed numeric turbidity limits for stormwater discharges from construction sites, but USEPA amended the rule to delete the imposition of numeric limits. 79 Fed. Reg. 12661 (May 5, 2014) (amending 40 C.F.R. Part 450). There, USEPA expressed "concern[] that a numeric limitation may create a disincentive to [use] green infrastructure techniques for managing stormwater. For example, meeting a numeric standard may require installation of a sediment basin or other impoundment on certain sites, which may be a disincentive to installing distributed stormwater controls." *Id.* at 12665.

[4] *See* EPA's 2012 Construction General Permit (CGP) (available at https://www.epa.gov/npdes/epas-2012-construction-general-permit-cgp-and-related-documents) and EPA's 2017 CGP (available at https://www.epa.gov/npdes/epas-2017-construction-general-permit-cgp-and-related-documents).

[5] *See* EPA's 2012 CGP, Fact Sheet §VIII, Part 3.2 ("compliance with the [CGP] generally will be sufficient to satisfy Tier 2 . . . and Tier 3 antidegradation requirements because the controls will not result in a lowering of water quality, making individualized Tier 2 or Tier 3 review unnecessary"); EPA's 2017 CGP, Fact Sheet § VI, Part 3.2, pp. 53-54 (same). EPA's CGP and the agency's determination of the effectiveness of its requirements extends to both upland and water crossing activities. EPA is the NPDES permitting authority in several states, including Massachusetts and New Hampshire. EPA's CGP is used in those state to regulate discharge of stormwater from both upland construction and at stream crossings. *See, e.g.*, NPDES Construction SWPPP prepared under EPA's 2017 CGP for "The Village at Bailey's Pond, Amesbury, Mass[,]" *available at* https://www.amesburyma.gov/sites/g/files/vyhlif6891/f/pages/amesburythevillageatbaileyspondswppp2017rev121317p.pdf. Included in the project description was a plan to "install utilities lines under the perennial stream...." SWPPP, p. 2. The installation of control measures was described as follows: "The crossing will be constructed by creating a small coffer dam around the crossing to allow the excavation of the utility line in dry conditions and prevent sedimentation from the excavation from entering the stream." SWPPP, p 3. The Town has noted that the project was approved. *See* https://www.amesburyma.gov/planning-board/pages/village-at-baileys-pond-24-pond-view-0-summit-avenue. Likewise, the operator of a proposed electric transmission line with both "overhead and underground" segments submitted a SWPPP to EPA in New Hampshire that included "both temporary and permanent wetland impacts" and "a total of 16 stream crossings...." *See* Stormwater Pollution Prevention Plan, Eversource Energy (May 6, 2019), §§1.1. The SWPPP was "developed in accordance with the ....EPA 2017 Construction General Permit..." §1.1.

[6] *Available at* https://www.epa.gov/sites/default/files/2021-05/documents/proposed_2022_cgp_-_fact_sheet.pdf.

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terms of the O&G CGP, entities seeking permit coverage submit a site registration application with detailed stormwater pollution prevention plans (SWPPP) for both upland construction and waterbody crossings. Those plans are then reviewed and approved by the Agency after public notice and comment.

The WVDEP's BMP Manual describes standardized and comprehensive erosion and sediment control practices that can be implemented on construction sites, including controls commonly used for linear construction projects, which often require in-stream construction and dewatering. BMP Manual at Ch. 3-21 (Instream BMPs) & Ch. 3-22 (Dewatering).[7] The Manual notes that it should be used as guidance for developing sediment control plans under the WVDEP's construction stormwater general permits. *Id.*, p. 1-1. The Manual recognizes that the USACE regulates most in-stream construction projects, but it also includes measures for controlling the mobilization of sediment from water crossing activities. In particular, it includes "several methods…which allow for 'work in the dry' to prevent excessive sedimentation" and includes detailed discussions about the uses of "pump-around," cofferdam, and "flume pipe" techniques for "stream crossings such as would be needed for a utility line crossing." *Id.*, pp. 1-1 & 3.21-3 to -6.

In 2017, after a lengthy review process, the WVDEP approved MVP's registration after finding that its controls would provide a level of water quality protection commensurate with USEPA's CGP. WV Permit No. WV0116815, Registration No. WVR310667 (MVP), WVDEP Responsiveness Summary (Nov. 1, 2017), pp. 75-77. To prevent and/or minimize discharges of sediment and sediment-related pollutants during construction, MVP will implement appropriate BMPs for erosion and sediment control, including in-stream BMPs, MVP's in-stream BMPs are consistent with WVDEP's BMP Manual and have proven effective at minimizing stream bottom scour and mobilization/entrainment of sediment. *See* ESCP, pp. 13 (stream crossing construction sequence), 14 (wetland crossing construction sequence), 15-17 (in-stream BMPs, dry crossing techniques, stream bank stabilization, temporary stream crossings), & 18 (control dewatering). MVP will complete stabilization and restoration of all disturbed areas in accordance with the approved O&G CGP, SWPPP, this Certification, and the Mitigation Framework. These measures have been modeled after those that the USEPA has determined will prevent degradation of surface waters. As discussed in other responses, WVDEP has determined that by complying with the O&G CGP and implementing the SWPPP, discharges from the Project will be controlled to ensure appropriate protection of aquatic resources and prevent any degradation of State waters and will therefore comply with the State's antidegradation policy.[8]

In addition, MVP has submitted its Mitigation Framework to supplement the other controls it has proposed. The Framework synthesizes the various state and federal regulatory requirements

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[7] WVDEP's BMP Manual is available at https://dep.wv.gov/WWE/Programs/stormwater/csw/Documents/E%20and%20S_BMP_2006.pdf.

[8] The WVDEP uses the same approach for all construction projects that are registered under its construction stormwater general permits. *See, e.g.*, WVDEP Responsiveness Summary, Registration No. WVR310820, Atlantic Coast Pipeline (Jan. 25, 2018), *available at* https://dep.wv.gov/WWE/Programs/stormwater/csw/Documents/ACP-RS-1-25-2018.pdf; WVDEP Responsiveness Summary, Registration No. WVR311281, Mountaineer Gas Co. Rt. 9 Extension (Mar. 29, 2019), *available at* https://dep.wv.gov/WWE/Programs/stormwater/ogcsw/Documents/Mountaineer%20RS.pdf; and WVDEP Responsiveness Summary, Registration No. WVR310872, Columbia Gas Transmission Mountaineer Xpress (Feb. 1, 2018).

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applicable to the Project, but also includes voluntary measures that MVP is not otherwise required to take. The Framework includes six interrelated components developed by MVP in consultation with the WVDEP and the USACE: (1) Baseline Assessment Plan, (2) Restoration Work Plan, (3) Performance Standards, (4) Monitoring Plan, (5) Maintenance & Adaptive Management Plan, and (6) Supplemental Credit Determination Methodology. Pursuant to the Baseline Assessment Plan, MVP conducted pre-crossing assessments of each proposed stream and wetland impact to characterize the conditions at each site and guide restoration plans. The Restoration Work Plan describes how impacts will be restored after construction based in part on the information gathered under the Baseline Assessment Plan. The Framework also sets forth Performance Standards, which define measurable goals to evaluate the success of MVP's restoration efforts. Under the Monitoring Plan, MVP will continue to monitor restored streams and wetlands for a period of three years after construction to ensure successful restoration. Under the Maintenance & Adaptive Management Plan, if post-construction monitoring demonstrates that restoration efforts are not progressing as expected, MVP will develop a site-specific plan, subject to WVDEP approval, of corrective action that provides for successful restoration. Finally, MVP developed a Supplemental Credit Determination Methodology to provide full compensation for temporary impacts from the Project, which will result in MVP providing significantly more compensatory mitigation than is required under state or federal law.

Taken together, MVP's construction stormwater controls, dry cut technology, and Mitigation Framework will protect existing water quality and uses by controlling sediment at its source, assessing habitat and biological conditions prior to crossings, evaluating impacts (if any) after crossings are completed, restoring habitat in accordance with defined benchmarks and mitigating for any remaining impacts.

Comment: Rivers and other commenters requested that, "WVDEP … deny MVP's application because they fail to provide evidence that they will be able to meet the state's water quality standards for turbidity."

WVDEP Response: As indicated in the Certification request MVP proposes to utilize erosion and sediment control BMPs and restoration plans to effectively control discharges of sediment and other pollutants that may be entrained with sediment. Also, WVDEP references the previous response to Appalachian Mountain Advocates regarding compliance with WQS and antidegradation review. When USEPA reissued its CGP in 2017 they reiterated its reliance on more stringent BMPs and other narrative effluent limits to implement antidegradation requirements for sediment-impaired, Tier 2, and Tier 3 waters without the need for extensive site-specific water quality data or individualized antidegradation review.

The WVDEP's O&G CGP mirrors the approach utilized by USEPA and agrees that "the non-numeric effluent limitations are designed to prevent the mobilization and stormwater discharge of sediment and sediment-bound pollutants, such as metals and nutrients." WVDEP recognizes that where metals and other potential pollutants that can be entrained in stormwater along with mobilized sediment, but implementation of erosion and sediment control BMPs will control discharges of such pollutants. If it is observed that turbidity is out of compliance with the water quality standards appropriate enforcement will be made by the WVDEP Environmental Enforcement ("EE") Program to ensure appropriate BMPs are utilized to control sediment within

the wetland and stream work areas. In the event a violation occurs, EE staff have a variety of mechanisms to ensure compliance with applicable water quality standards. As noted here and elsewhere, USEPA has determined, and the WVDEP concurs, that the use of these measures and this enforcement regime will prevent any lowering of water quality. *See also* the WVDEP's response above regarding antidegradation review and turbidity.

Comment: Rivers requests that, "WVDEP … deny MVP's Water Quality Certification because cumulative watershed-scale impacts and the effect on water quality and watershed health have not been fully analyzed."

WVDEP Response: As discussed above, the WVDEP's rules do not expressly require an assessment of cumulative impacts, but nonetheless cumulative impacts were reviewed and considered. First, potential cumulative sedimentation impacts were considered and addressed by the application of the engineering controls imposed by the O&G CGP and described in the Section 404 application. As noted elsewhere, USEPA has determined, and WVDEP concurs, that the use of those controls will prevent any lowering of water quality. Second, in response to comments by the USEPA to the USACE, MVP prepared and submitted to the WVDEP and the USACE a Cumulative Impact Assessment Report which found that the Project will have negligible impacts in each Hydrologic Unit Code (HUC) 12-digit watershed. Permanent stream impacts are limited and are primarily the result of installing, repairing, or replacing culverts under access roads. See Attachment 4 to MVP's Response to USACE August 30, 2021 Request for Information. These impacts will not result in any post-construction reduction in the linear feet of stream within the watersheds, but rather represent the placement of structures in-stream. Temporary impacts are primarily associated with timber mat crossings or the pipeline Right of Way (ROW). Timber mats are placed within the ordinary high-water mark and thus are included in the impacts; however, they do not sit in the streambed and do not alter substrate. These structures also have little to no potential to affect water quality or aquatic habitat. Further, crossings in many of the intermittent and ephemeral streams will be completed during low flow or no flow conditions, minimizing the potential for downstream water quality implications. All these factors play a role in minimizing the potential effects both individually and cumulatively.

For those permanent and conversion impacts resulting from the proposed activity, MVP will provide mitigation through the purchase of mitigation bank and/or in-lieu fee credits. Temporary impacts will be restored post construction in accordance with the SWPPP, O&G CGP, this Certification, and Mitigation Framework. The result is an extremely small fraction of impacts resulting in permanent loss of aquatic function, which are mitigated within the watershed and in some cases no permanent impact in a particular 12-digit HUC watershed.

Comment: Rivers and other commenters suggest, "WVDEP cannot rely on the effectiveness of best management practices to ensure water quality standards will be met."

WVDEP Response: MVP will implement appropriate BMPs for erosion and sediment control, including in-stream BMPs, and will complete stabilization and restoration of all disturbed areas. These measures have been modeled after those that the USEPA has determined will prevent any degradation of surface waters in its 2012 CGP Fact Sheet, § VIII.3.2. WVDEP notes that under the Clean Water Act § 402 permitting program (the NPDES program), USEPA's regulations

expressly authorize the use of BMPs to ensure compliance with water quality standards. *See* 40 C.F.R. § 122.44(k). While discharges of stormwater from construction of natural gas pipelines are exempt from federal NPDES permitting requirements, USEPA's stormwater regulation provides:

> EPA encourages operators of oil and gas field activities or operations to implement and maintain Best Management Practices (BMPs) to minimize discharges of pollutants, including sediment, in storm water both during and after construction activities to help ensure protection of surface water quality during storm events. Appropriate controls would be those suitable to the site conditions and consistent with generally accepted engineering design criteria and manufacturer specifications.

40 C.F.R. § 122.26(a)(2)(ii). In addition, the United States Court of Appeals for the Fourth Circuit affirmed Virginia's decision to grant a §401 certification to MVP based on the agency's finding that implementation of BMPs, frequent monitoring, and prompt corrective action will ensure compliance with water quality standards, including antidegradation policy. *Sierra Club v. State Water Control Bd.*, 898 F.3d 383, 405 (4th Cir. 2018). The Court also affirmed Virginia's reliance on USEPA's technical expertise and its conclusions regarding the effectiveness of BMPs in its own construction stormwater general permit. *Id.* at 406.

Comment: WVDEP received many comments arguing that WVDEP cannot grant §401 certification because MVP's compliance history demonstrates that discharges from the Project will not comply with water quality standards and will harm aquatic life and/or the aquatic ecosystem.

WVDEP Response: WVDEP does not agree that MVP's past violations of the O&G CGP demonstrate that discharges from the Project will not comply with water quality standards. WVDEP does not regard the number of violations its inspectors issued as surprising given the size of the Project, the unusual length of time that the Project has remained incomplete and areas have been left unrestored (due to litigation-related delays), and the fact that WVDEP's inspectors monitor sites frequently and immediately respond to citizen complaints when submitted. In response to every notice of violation issued by a WVDEP inspector, MVP has provided a timely written response describing the measures taken to address the issues identified and documenting (with photographs) these efforts. All noncompliance was addressed immediately (or as soon as conditions allowed) and the overwhelming majority of the cited violations were not associated with any aquatic impacts. While some violations noted releases of sediment beyond the limits of disturbance or into waters of the State, none alleged that any significant adverse impacts to the aquatic ecosystem occurred as a result.

In response to a request from the USACE, MVP provided documentation of pre- and post-construction conditions at all waterbody crossings that were completed under the previous Nationwide Permit 12 authorization. *See* Attachment 2 of MVP's Response to USACE's August 30, 2021, Request for Information. This information, which includes photographs taken before construction and after restoration, showed well-established vegetative growth and a return to pre-construction contours at each location, and no evidence of any lasting impacts. This information provides additional evidence that MVP's compliance history does not suggest that the remaining

construction will result in significant aquatic impacts amounting to a violation of water quality standards.

WVDEP also notes that during the life of the Project, it has received numerous citizen complaints (including some commenters) alleging that MVP has violated the requirements of the O&G CGP and/or caused damage to the State's waters, and a WVDEP inspector has followed up on each of these complaints. Only a very small percentage of the citizen complains resulted in a violation, and none of the violations were considered to have caused significant adverse impacts to the aquatic ecosystem.

Commenters who submitted identical form letters: A. Foss, Abigail Bromley, Adam Donofrio, Adam Johnson, Aileen Curfman, Alan Kuhlman, Alana Flynn, Alicia Pingley, Amy Scott, Anastasya Tabb, Angela Hughes, Angela Mayle, Ann Knott, Anna Smucker, AnnaMary Walsh, Arietta DuPre, Art Glick, Ashly Bargman, August Wade, Augustus Anderson, Barbara Brown, Barbara Daniels, Barbara Frierson, Barbara Hoeft, Barbara Steinke, Barkley Castro, Barry O'Keefe, Ben Badger, Benita Keller, Betty McClintock, Bill Franz, Bill Quigley, Bob Chamberland, Brad Riffee, Brad Smith, Brenda Walters, Burwell Ware, C. Connie, Carli Mareneck, Carol Hermanson, Carol Wood, Carol Workman, Carole and Todd Jenkins, Carole Williams, Carolyn Thomas, Cathryn McCue, Charles Brabec, Charles Conrad, Charles Marsh, Charles Schade, Charlotte Fremaux, Chelsea Easter, Cheryl Pullen, Cheyenne Carter, Chris Benison, Chris Chanlett, Chris Craig, Chrissy Zeltner, Christina Melocik, Christine Atwell, Christine Mitsch, Christopher Byrd, Christopher Hutton, Claire Kuliesh, Clara Halfin, Conni McMorris, Cynthia Fraula-Hahn, Cynthia Munley, Danette Condon, Danielle Williams, Darlene Russell, Dave Cardella, Dave Hawkes, David Bott, David Brisell, David Lillard, David Romine, Debbie Naeter, Deborah Klimek MD, Debra Jarvis, Deborah Parsons, Dede Cassis, Dennis Hatcher, Diana Greenhalgh, Diana Mullis, Dianne Roman, Dominique Lategano, Don Harding, Don Sauter, Donald Lynch, Donna Diehl, Donna F. Printz, Donna Miller, Donna Pitt, Donna Verdier, Donna Weems, Doug Evans, Doug Krause, Edward Lynch, Edward Savage, Edward Zahniser, Elaine Komarow, Elizabeth Hastings, Elizabeth Struthers Malbon, Elizabeth Wheeler, Ella Belling, Elle De La Cancela, Emily Dragon, Emily Little, Emily Pelland, Eric Engle, Eugene Misch, Eve Coffey, Fernando Rodriguez, Francis Sullivan, Frank Bordo Jr., Franklin Anderson, Franklin Crabtree, Gene Holland, Gene Kistler, George Little, George Ohrstrom II, Giulia Mannarino, Grace Lynch, Grace Tuttle, Grazia Apolinares, Gregory Wingo, Gwen Parker, Hannah King, Hannah Varner, Herb and Myers, Herman Mann, Holly Bradley, Holly Cloonan, Howdy Henritz, Irene Larew, J. B. Witten, Jack Swiney, Jacqueline Trump, James and Terri Walker, James Leach, James Shelton, James Walker, James Webb, Jane Birdsong, Jane Butler, Janet Arevalo, Jason Oosterwijk, Jeff Gieseke, Jeff Kauffman, Jeff Kershner, Jeffrey Collins, Jeffrey Straight, Jennifer Meinig, Jerry Bowles, Jerry Carson, Jesica Sims, Jim Lilly, Jo Brown, Jo Will, Joe Webb, Joanne Bario, Joette Borzik, Johanna Hermanson, John Bird, John Brady, John Doyle, John Doyle, John Dropp, John Geelhaar, John Harshbarger, John Lambertson, John Marsal, John Pullen, Johnathan Brier, Johnathan Pilkington, Joseph Chasnoff, Joseph Golden, Joseph Spurgas, Joshua Smith, Judith Clister, Judith Harel, Judith Smallwood, Judy Curry, Judy Hamilton, Juliet Marlier, Karen Federov, Karen King, Karen Yarnell, Kat Cooper, Katherine Gregg, Kathleen and Richard Mundell, Kathryn Bellacosa, Kathryn Madison, Katy McClane, Kay Ferguson, Kelley Sills, Kelly Campbell, Kent Karriker, Kerren Hall, Krista Scott, Larry Levine, Larry Thomas, Laura Izzo, Laura Tinney, Laura Walker, Lauren Wadsworth, Lauren Westminster Abby, Laurie Methven,

Leah Rampy, Leigh Keener, Lella Miller, Leslie Devine-Milbourne, Letty Butcher, Linda Foster, Linda Koval, Linda Zwobota, Lisa Mitchell, Lisa Payne, Lorenz Steininger, Lorrin Pickens, Lydia Patton, Lynn McKinney, Mabel Eisenbeiss, Mallory Nowlin, Marc Koslen, Margaret Ann Paxton, Margaret Davis, Margaret Foote, Marian Keyes, Mark Blumenstein, Mark Connelly, Marsha Wells, Martha Walker, Martha Wine, Martin Burke, Mary Lickert, Mary Mattlage, Mary McLaughlin, Mary Reed, Maya Hoffman, Melanie Penaranda, Melda Clark, Melissa Shafer, Merri Morgan, Michael Baranski, Michael Klausing, Michael Lynn, Michael Turner, Michael Whitten, Mike Law, Monty Fowler, Morgan Jones, Nan Gray, Nancy Cordonier, Nancy Dickinson, Nancy Guile, Nancy Guile, Nancy Ward, Naomi Cohen, Natalie DeBoer, Natasha Sandell, Nicholas Polys, Pam Kay, Pamela Rowley, Pamela Ruediger, Patricia Gundrum, Patti Chlepas, Patti Miller, Paul Hancock, Paula Mann, Paula Tremba, Penny Manion, Peter McCumber, Phil White, Priscilla Ireys, Rachel Dash, Rachel Shirley, Rebecca Hamilton, Rebecca Romine, Regina Hendrix, Rhonda Marrone, Richard Justice, Richard Maxwell, Richard Mier, Rick Clark, Rita Lewis, Robert E. Bittinger Jr., Robert Mertz, Robert Stanley, Robin Wright, Russell Chisholm, Ruth Hatcher, Ruth Hyatt, Ryan Brookes, S. Thomas Bond, Sally Anderson, Sally Egan, Sally Lemke, Sara Bell, Sara Jobin, Sara Wilts, Sarah Phillips, Sarah Umberger, Sassi Harel, Scott Gibson, Scott Gibson, Scott Thompson, Shara Harel, Sharon Watkins, Shelia Hauser, Shellee Tyler, Shirley Napps, Stephanie Goettge, Stephen Bodnar, Stephen Southworth, Steve Curry, Steve Foehner, Steve Malafy, Steven Runfola, Steven Spriggs, Steven Vogel, Sue Covello, Sue Devall, Sue Julian, Susan Sailer, Susan Taylor-Dropp, Suzanne Clewell, Suzanne Kruger, Sylvia Hawkes, Takayla Nary, Tamatha Cheke, Tauna Davis, Teresa Corder-Erickson, Teresa Parcell, Teresa Sopher, Terra McColley, Terry and Clayton Webb, Terry Johnson, Terry Walker, Terry Wolfe, Thomas Epling, Thomas Johnson, Timothy Simmons MD, T.J. Walker, Tom Degen, Tom France, Tom VanDyke, Tracy Asbury, Tracy Marsh, Travis Stimeling, Tripp Gibson, Tyler Guthrie, Valerie Griffin, Victoria Stone, Wade Miller, William H. Funk Esq. and William Turner

Form Comments:

1. MVP cannot comply with water quality standards. MVP has shown that they do not operate and maintain their erosion control measures and best management practices as required and thus have already violated water quality standards and been cited by DEP approximately 50 times for creating conditions not allowable in waters of the state.

2. MVP has not avoided and minimized impacts. Of the approximately 50 streams designated as trout waters planned to be crossed, MVP has plans to bore under only 2 of them. The remaining trout streams face increased sedimentation that will be detrimental to the trout and their habitat. MVP has not gone to any lengths to minimize impacts to sensitive trout streams.

3. As required under the Clean Water Act, DEP must perform an anti-degradation review on all streams impacted by MVP construction to determine whether existing uses and the level of water quality necessary to protect such uses will be maintained and protected.

4. DEP cannot complete the anti-degradation review without adequate baseline monitoring data. MVP must be required to conduct turbidity monitoring on all streams potentially impacted by construction. Failure to do so violates the provisions of the Clean Water Act.

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5. MVP has not supplied sufficient information for the Department to be reasonably assured that the State's water quality standards would be met during construction and operation of the proposed pipeline. I urge DEP to deny MVP's 401 Water Quality Certification.

WVDEP Responses to Form Comments:

1. The subject of the current certification request associated with the MVP project is whether the information provided by the applicant satisfies the regulatory requirements applicable to the §401 WQC review process. The WVDEP's review of information provided by MVP has satisfied those review requirements for the subject project and demonstrate that the implementation of the project as proposed will meet water quality requirements and will not degrade the designated uses of the waters of the state. The previous actions of the applicant are not the subject of this review and have been handled in accordance with the appropriate environmental enforcement mechanisms at the disposal of the WVDEP. MVP has worked with the environmental enforcement program at WVDEP to resolve any and all notices of violation as is evident by information provided by the company and WVDEP staff. *See also* the WVDEP's previous response to comments regarding MVP's compliance history.

2. Based on a review of the alternatives analysis and avoidance and minimization measures MVP has demonstrated that they have avoided trout streams to the best of their ability and will operate in accordance with the WVDNR's spawning requirements or has obtained waiver for those requirements from the WVDNR, which serves as a contributor to the WVDEP when assessing whether a project's impacts will degrade trout waters. MVP has also indicated in the Certification request that open bottom box culverts will be utilized at all permanent stream crossings on trout streams. MVP will comply with the requirements set forth in the WV O&G CGP, SWPPP, and Certification to ensure protection of trout waters.

3. The WVDEP references the previous response to comment regarding protection of designated uses and compliance with the Antidegradation Implementation Procedures. W. Va. Code R. § 60-5-1, *et seq.* Also, the USEPA has stated in its 2012 Construction Stormwater General Permit Fact Sheet, §VIII.3.2 that the use of appropriate BMPs consistent with the USEPA 2012 CGP will ensure, "stormwater discharges being controlled as necessary to meet applicable water quality standards (which include state antidegradation requirements)." MVP's O&G CGP requires implementation of BMPs throughout the entire Project that are equivalent to those required by the USEPA CGP for sites discharging to sediment impaired waters, Tiers 2 and Tier 3 waters. WVDEP reviewed the stormwater plans submitted by MVP for its registration under the O&G CGP in 2017, and subsequent modifications of those plans, and determined that MVP's site-specific best management practices will provide a measure of control equivalent to the requirements that USEPA's CGP imposes for sensitive waters.[9]

4. The antidegradation implementation rule provides that "[t]he level of review required will depend on the existing uses of the water segment that would be affected, the level of

[9] *See* WV General Permit No. WV0116815, Registration No. WVR310667, WVDEP Responsiveness Summary (Nov. 1, 2017), pp 75-77, *available at* https://dep.wv.gov/WWE/Programs/stormwater/csw/Documents/mvpresponse11-1-17.pdf.

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protection assigned to the applicable water segment, the nature of the activity, and the extent to which existing water quality would be degraded." W. Va. Code R. § 60-5-1.5.a.

As indicated in the Certification request MVP proposes to utilize erosion and sediment control BMPs and restoration plans to effectively control discharges of sediment and other pollutants that may be entrained with sediment. By complying with the WV O&G CGP, implementing the proposed SWPPP and complying with Certification conditions MVP will control discharges from the Project to ensure appropriate protection of aquatic resources and prevent any degradation of State waters and will therefore comply with the State's antidegradation policy.

For additional information regarding turbidity monitoring please refer to the previous response to Rivers' comment. *See also* WVDEP's response to comments regarding antidegradation review of stormwater discharges and discharges of dredged or fill material.

5. Please see previous response to Rivers' comments regarding compliance with water quality standards. In addition, WVDEP notes that the Project is subject to many other state and federal regulatory programs, permits, and approvals. The overall Project was originally authorized by FERC in October 2017, and WVDEP participated as a cooperating agency in FERC's preparation of an environmental impact statement (EIS), which thoroughly evaluated the potential environmental impacts of the entire Project. Other state and federal agencies, including the USEPA, the USACE, the United States Fish & Wildlife Service, the WVDNR, and the Virginia DEQ also participated and commented on FERC's EIS and most have imposed their own regulatory requirements on the Project.

In FERC's final EIS, it noted that MVP would implement FERC's general construction, restoration, and operational measures to minimize impacts to wetlands and waterbodies. FEIS, 2-30 to -31. It described measures to be undertaken by MVP in excavating trenches and water crossings, backfilling the trench, restoring topographic contours, and restoring soil and vegetation. *Id.* at 2-38 & 2-41. Initially, MVP proposed some "wet" open-cut crossings, but later determined that all streams would be crossed using dry-ditch methods. *Id.* at 4-118. FERC reviewed literature on the effectiveness of dry-ditch crossing methods and noted that the U.S. Geological Survey had found that "short term increases in turbidity downstream of construction did occur, but the magnitude of the increase was small and considered to be minimal compared to increased turbidity associated with natural runoff events." *Id.* at 4-120. FERC reviewed other literature indicating that the duration of any increased sedimentation would be short-term and remain near the crossing location. *Id.*

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Commenter: Susie Vance

Comment: "You guys really seriously need to be assessing the situation. Climate patterns have changed. The inundation we get in that area mainly come from Gulf moisture mixing with cold fronts coming from the north. Every year we seem to have more and more rain, more and more flooding. And the sedimentation is really, really bad. And I'm going to request that you deny any certificate."

WVDEP Response: The WVDEP does not consider global climatic condition in the review and determination of a Certification decision due to the scope of review being applicable to aquatic resources within the WVDEP's jurisdiction consistent with the Rules for Individual State Certification of Activities Requiring a Federal Permit, W. Va. Code R. § 47-5A-3. In regard to sedimentation concerns, MVP must comply with the WV O&G CGP, implement the proposed SWPPP, and comply with Certification conditions to control potential sediment discharges from the Project to ensure appropriate protection of aquatic resources, water quality and prevent degradation of State waters.

Commenter: Kirk Bowers

Comment 1: "The application and stream and river crossing plans and protocols are not ready for review because they are lacking implementation and there are numerous errors in the tables used and crossing methods of streams. The documents were hastily prepared with little thought about environmental impacts. Reasons used to justify choices across the methods are flawed and are not relevant."

WVDEP Response: The WVDEP worked extensively with MVP to resolve concerns regarding temporary and permanent stream crossing and BMP protocols including the development of a Mitigation Framework, which includes assessment and monitoring of pre-crossing conditions; performance standards for achievement of successful stream and wetland restoration; post-construction stream and wetland monitoring; a maintenance plan and an adaptive management plan; as well as supplemental mitigation to ensure that all temporary impacts are restored appropriately or mitigated if a permanent loss of function is determined to have occurred by WVDEP. The WVDEP through a due diligence review observed issues in documentation of resources and has worked with MVP to ensure all resources are identified and appropriately included in the WV O&G CGP and Certification to ensure protection of designated uses and water quality. In regard to the alternatives analysis, the WVDEP references the previous discussion of alternatives analysis in the first response to AMA comments.

Comment 2: "The plan seeks to not include any erosion control measures on the construction plan sheets."

WVDEP Response: Due to the complexity of the drawings erosion and sediment control structures, also referenced as BMPs, are not identified on all plan sets, but are identified in detail in Section 15 - Detailed Site Map(s) of Erosion and Sediment Controls of the WV O&G CGP, which has been thoroughly reviewed for compliance with state requirements and protection of water quality and designated uses by WVDEP staff. This mapping is available for public review by using the WVDEP E-Permitting Application Search tool.

Comment 3: "Degradation of aquatic habitat is the primary cause for the loss of biodiversity in streams and rivers. Much of the rich aquatic fauna in West Virginia is threatened by pipeline and natural gas wellhead. Settlement from these construction projects is one of the primary causes of habitat degradation. Use of dry cut trenching methods across the streams will introduce large quantities of sediment into downstream channels."

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WVDEP Response: The WVDEP agrees, generally, that a loss of biodiversity in waters may be caused by water quality and habitat degradation. It is for this reason that the WVDEP has reviewed and issued the WV O&G CGP and a Certification of the USACE Individual Permit for the proposed project activity to ensure compliance with state requirements established to protect water quality and the important designated uses of our state waters. WVDEP disagrees that dry-ditch trenching methods will introduce sediment that will have significant or long-term impacts downstream. The majority of peer-reviewed literature on this subject shows that dry-ditch crossing methods do not result in significant sedimentation impacts. *See also* WVDEP's previous response discussing the literature regarding impacts from construction of waterbody crossings.

Comment: Kirk Bowers and other commenters objected to a lack of information regarding erosion control.

WVDEP Response: Due to the complexity of the drawings, erosion and sediment control structures, also referenced as BMPs, are not identified on the plan sets provided with the original application that was reviewed by commenters. Detailed BMPs are identified in Section 15 - Detailed Site Map(s) of Erosion and Sediment Controls of the WV O&G CGP, which WVDEP thoroughly reviewed for compliance with state requirements and protection of water quality and designated uses as part of the 401 WQC review process. This mapping is available for public review by using the WVDEP E-Permitting Application Search tool.

Comment: Kirk Bowers, AMA, Rivers, ICWA, and others raised concerns regarding errors, inconsistencies and inadequate information in MVP's original application that make it impossible to accurately determine how many and which streams and wetlands have been crossed and remain to be crossed, and by what method.

WVDEP Response: The regulatory review process inherently requires the applicant to revise documents during the agency's review when errors, inconsistencies and information deficiencies arise. This is a common procedure for a 401 WQC project review. The WVDEP in conjunction with the USACE worked diligently with MVP to resolve information deficiencies and errors. The WVDEP was provided updated information and revisions upon request and received final updated copies of pertinent tables and information applicable to the final review of the activity on October 4th, November 5th, and November 15th, which serve as the final documentation utilized in rendering the attached Certification decision.

Comment: ICWA purports that MVP's proposal to seek necessary variances or applicable approvals to revise the crossing method from a bored crossing to an open-cut crossing upon two failed attempts is not a plan and is an inappropriate approach.

WVDEP Response: The WVDEP has been asked to certify the crossings in the application submitted to the USACE. The application does not seek approval for open cuts at bore locations. WVDEP believes it highly unlikely that open cuts will be needed at those locations.

Commenter: Hannah King (West Virginia Environmental Council)

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Comment 1: "So far, there have been 50 water quality violations that have been documented from the West Virginia DEP against MVP… we can't afford any further water quality violations from MVP. There are 200 streams the MVP will be crossing if this permit is granted and we can't accept the risk of more violations of water quality standards"

WVDEP Response: While WVDEP has issued reports of violations of MVP's O&G CGP, relatively few related to water quality and none observed any significant or aquatic impacts in terms of duration or intensity and none interfered with protected water uses. MVP has worked with the Environmental Enforcement Program at WVDEP to resolve any and all notices of violation as is evident by information provided by the company and WVDEP staff. *See also* WVDEP's earlier response to comments regarding MVP's compliance history.

Comment 2: "We have to hold MVP accountable for impacting our streams and rivers, and must increase the penalty costs for fines."

WVDEP Response: The WVDEP's Environmental Enforcement Program is responsible for the inspection of projects and development of fee schedules and is not the subject of this Certification. The WVDEP agrees that applicants should be held accountable for impacts to streams and wetlands and has conditioned the Certification to address these concerns and has worked with MVP to develop a Mitigation Framework to ensure accountability for not only permanent impacts, which will be mitigated, but also temporary impacts.

Comment 5: "Our native brook trout cannot thrive and live in dirty muddy waters. If we want to keep these species safe and thriving, we have to hold MVP accountable and not grant any more water quality permits."

WVDEP Response: The WVDEP agrees that it is imperative to protect and maintain the designated uses of state waters and has considered protection of those uses during the review process for the MVP request for Certification. Appropriate BMPs will be utilized in accordance with the WV O&G CGP and this Certification to protect aquatic life and their habitat. Permanent stream crossings on B-2 trout waters will be installed in such a manner that the box culvert maintains substrate in the bottom for aquatic organism passage to headwater spawning areas and natural refuge areas. At crossings of and in proximity to Tier 3 and trout waters, MVP will implement advanced erosion and sediment engineering controls and will stabilize disturbed areas more quickly, which will provide additional protection to these waters.

Commenter: Autumn Crowe (West Virginia Rivers Coalition)

Comment: "According to the Clean Water Act, you cannot approve a project that will violate water quality standards. You could put all the special conditions you want on this permit, but we all know that MVP will not meet those conditions."

WVDEP Response: The WVDEP requires that MVP comply with the conditions of the WV O&G CGP and will enforce those requirements through the Environmental Enforcement Program. That permit is modeled after USEPA's CGP and is designed to prevent any lowering of water quality. The conditions of this Certification are also intended to protect the water quality and

designated uses of aquatic resources and are enforced by the USACE. If MVP does not comply then appropriate enforcement actions will be taken to ensure the protection of water quality and designated uses.

Commenter: James Kotcon (West Virginia chapter of Sierra Club)

Comment 1: "They (aquatic resources) are not something that can be readily mitigated, nor has MVP demonstrated that they have the capacity to mitigate those concerns."

WVDEP Response: The WVDEP has worked diligently with MVP to develop a Mitigation Framework that will address monitoring of the aquatic resource crossings and ensure they are restored to baseline condition. If restoration does not achieve the required targets, mitigation will be required to offset the impacts consistent with the Mitigation Framework and Certification conditions.

Comment 2: "If DEP does decide to issue a 401 certification, you must include the sufficiently protected requirements, and the enforcement requirements to overcome the previous bad behavior by MVP."

WVDEP Response: The WVDEP has included conditions in the attached Certification to ensure protection of aquatic resources as well as additional monitoring and performance measures to document compliance with those requirements.

Comment 3: "DEP should also consider the social cost of carbon, the greenhouse gas emissions associated with this factor. The EPA just recently affirmed a social cost of carbon in excess of $50 per ton, that literally millions of dollars of costs every year."

WVDEP Response: Greenhouse gas emissions are not within the scope of review for this Certification action.

Commenter: Vicki Pierson

Comment: "Down slope of the pipeline there has been considerable erosion caused by Mountain Valley concentrating and directing this water onto our property, causing significant local immersion and also downstream origin of streambeds, which results in significant silt being discharged into the Burnsville reservoir. We would like to request that DEP enforce the law on existing violations and deny any MVP applications that impact waterfall."

WVDEP Response: The WVDEP Environmental Enforcement Program is responsible for the enforcement of the WV O&G CGP and have worked diligently to ensure compliance across the MVP project to date. Thank you for your comment and your concerns have been passed along to the Environmental Enforcement Program staff. *See also* WVDEP's previous response regarding MVP's compliance history.

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