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Agency echoes local, forest service pipeline project worries

BY JOHN BRUCE • STAFF WRITER

MONTEREY — Once again, federal regulators have sent Dominion back to the drawing board.

The Federal Energy Regulatory Commission on Oct. 26 issued a 32-page "environmental information request" for the proposed Atlantic Coast Pipeline, reflecting landowner and U.S. Forest Service concerns about karst, steep slopes, threatened species, and conformity to forest land management plans.

Strict new rules, many seeming insurmountable, would apply to the project.

FERC directed Dominion to file documentation showing the company is allowed to establish "an easement for the proposed pipeline on each Virginia Outdoors Foundation easement" potentially crossed. "Dominion should identify any specific construction, restoration or operation mitigation measures identified by the VOF that would be implemented to promote compatibility with the purpose and values of the easements," FERC said.

The agency specified a Tuesday, Nov. 15 deadline for Dominion to answer this, and a list of 68 other detailed FERC directives, many including multiple subparts. But it was unclear how Dominion could answer the easement question in time because the VOF doesn't take up the matter until its February 2017 board meeting.

One of the first FERC requests is for Dominion to provide a response to reports by William K. Jones, titled "Hydrogeologic Setting of Little Valley at Bolar, Bath County, Virginia," and Richard A. Lambert's "Assessments of Four Karst Systems in Highland-Bath Counties, Virginia along the GWNF-6 Route."

The request responds to a Sept. 12 filing by Jeannette Robinson and her intervenor motion filed Sept. 23.

FERC directs Dominion to:

• Resolve the discrepancy between the numbers, types, and density of karst features and springs found in Little Valley with those Jones documented;

• Discuss groundwater travel times, shown by dye trace tests Jones documented, and discuss the degree of karst development expected along the pipeline alignment and specific construction mitigation measures to protect groundwater receptors;

• Provide a thorough assessment of karst development and potential impacts on surface water and groundwater resources through Dever Spring Recharge Area caves, Little Valley, Burnsville Cove, and Brown's Pond Cave Ridge Poplar Hollow; and

• Provide an updated karst mitigation and monitoring plan developed in coordination with appropriate agencies that takes into account unknown underground features, porosity, and connectivity of subterranean systems, and the potential implications to subterranean obligate species. "These species include the federally threatened Madison Cave isopod, several USFS RFSS and GWNF locally rare species, and VDCR and West Virginia Division of Natural Resources state-listed or sensitive species. Conservation measures included in the revised plan should be designed to appropriately address potential impacts to these species. Provide copies of correspondence with the appropriate federal and state agencies that indicates their concurrence with the proposed avoidance and mitigation measures proposed in the plan," FERC said.

National forest concerns

George Washington National Forest officials expressed concern about the proposed crossings of Laurel Run, unnamed tributaries to Calfpasture River at Dowells Draft, and an unnamed tributary to Jennings Draft at White Oak Draft. Each is a wild brook trout stream in Bath or Augusta counties. A proposed access road would parallel Laurel Run within the riparian corridor and would cross the stream several times, which is inconsistent with forest plan standards and Best Management Practices relating to soil and water, they noted.

GWNF is reviewing other crossing locations for consistency with forest standards and BMPs. Forest officials requested Dominion re-evaluate its proposed crossings of these streams.

FERC told Dominion to "consult with the GWNF to determine the appropriate measures (e.g., minor rerouting or additional conservation measures) to avoid or minimize impacts on Laurel Run, and the unnamed tributaries of Calfpasture and Jennings Draft and to ensure consistency with forest plan standards and BMPs, and file with (FERC) the results of this consultation and any route adjustments that are necessary."

The agency directed the company to coordinate with the U.S. Fish and Wildlife Service, GWNF, and the Virginia Department of Conservation and Recreation to determine the necessary course of action for avoiding and minimizing potential impacts on the small whorled pogonia population in the national forest. The threatened orchid species grows in the Allegheny Highlands. FERC also said to "fully describe the bald and golden eagle conservation measures and protocols that would be implemented on USFS lands."

Forestry officials noted the GWNF Land and Resource Management Plan requires a minimum of a 100-foot buffer around all perennial streams and water bodies, which increases with slopes greater than 10 percent. For intermittent streams, the riparian buffer is a minimum of 50 feet and increases with slopes greater than 10 percent. For channeled ephemeral zones, there is a 25- foot buffer requirement. The mostly dry channels flow for relatively brief periods during snowmelt or after rainfall.

"Similarly, the Monongahela National Forest Land and Resource Management Plan requires a 100-foot buffer along all perennial and intermittent streams with a drainage basin of 50 acres or greater, a 50- foot buffer along intermittent streams with a drainage basin of less than 50 acres, and a 25-foot buffer along perennial streams," they said.

FERC instructed Dominion to revise the Construction, Operation and Maintenance plan to include a commitment it would maintain the buffers around all streams for all ground-disturbing activities, and/or additional conservation measures developed in coordination with the GWNF and MNF where it cannot adhere to this restriction. "Provide the appropriate agency correspondence that documents this coordination effort," FERC said.

"Water withdrawal and discharge would not be allowed on the GWNF," FERC continued, telling Dominion to revise its construction plan to include a commitment it would not conduct take water within the GWNF.

"The USFS requires that all topsoil be segregated, regardless of depth," FERC continued. Dominion was told to revise its plan to include a commitment it would segregate all topsoil on USFS lands, and/or additional conservation measures where it cannot adhere to this restriction.

"During 2015 and 2016 field surveys, (Dominion) identified American ginseng … a Virginia state-listed species, within the construction right of way," FERC noted. "The GWNF has requested that Atlantic prepare a relocation plan for American ginseng to outline the conservation measures that would be implemented, including transplantation. Prepare an American ginseng relocation plan that fully describes the conservation measures, and the conservation measures that would apply to the American willow-herb and American vetch, developed in coordination with the GWNF to be included with the COM Plan," FERC stated.

Also, based on the 2016 Virginia Small Mammal Report, Allegheny woodrats (on the state watch list) and southern and American water shrew (state endangered) may occur in the ACP project area, FERC said. "As such, species-specific avoidance measures may be necessary to ensure continued viability of local populations of this species. Provide a full description of the conservation measures, developed in coordination with the VDGIF, that (Dominion) would implement for the Allegheny woodrat and southern and American water shrew. Provide the appropriate agency correspondence that documents this coordination effort," the agency said.

In Virginia and West Virginia, woodrats are found on ridges, on side slopes in caves and talus (boulders and breakdown) fields. Both species are indigenous to central Appalachia. "For species that have the potential to occur in the ACP project area, the VDGIF recommends the time-of-

year restrictions," FERC noted, asking Dominion to confirm it would adhere to those timing restrictions for all activities, including taking water.

First on the VDGIF's list are brown and brook trout waters. No in-stream work is permitted between Oct. 31 and March 31, yet Dominion has stated it would begin construction in fall 2017 and build the pipeline through the winter.

Because the proposed pipeline appears to cross portions of the Cove Cave Conservation Site, FERC instructed Dominion to:

• Summarize any discussions it's had with DCR about the site;

• If data is available, describe the proximity of the cave system to the proposed trenching and potential impacts that could occur to the cave system;

• Describe whether route adjustments could be made to avoid or minimize impacts on Cove Cave; and

• Describe the potential impacts of natural gas being drawn into a cave system due to barometric changes and methane dissolution into groundwater in the event of a natural gas leak.

Drilling down on karst

FERC asked Dominion to identify whether it would implement certain measures to reduce the risk of or minimize impacts resulting from construction through karst terrain by providing an updated karst terrain assessment, construction, monitoring, and mitigation plan.

Further, the agency directed Dominion to implement a karst-specific erosion and sediment control plan that specifies its measures to protect groundwater and surface water resources during construction. The company must:

• Use a karst specialist during construction to confirm, monitor, and assist in limiting potential negative impacts by identifying potential connectivity to the subterranean environment, assessing risk for impacting groundwater quality and recharge, and providing recommendations for karst feature stabilization and mitigation;

• Include as "suspect" the following features to be characterized during inspection of karst features intercepted during construction: soil subsidence, rock collapse, sediment filling, sinking or losing streams, springs, seeps, flooding, and caves or void space;

• Document all level 1 and 2 inspections of karst features on a form, including digital photographs, GPS coordinates, and nearest milepost;

• Conduct weekly level 1 inspections of any stabilized or mitigated karst feature and document while construction is ongoing within 150 feet of the feature; and

• If karst features are encountered that require stabilization or mitigation, consult with and incorporate recommendations from the appropriate state agency (VDCR, Karst Protection in Virginia, and the West Virginia Department of Environmental Protection, including stormwater permitting personnel).

"To minimize connectivity and sediment transport to nearby water resource receptors (wells, springs, surface water) during pipeline construction, and to minimize construction impacts on groundwater resources within karst terrain, the karst-specific erosion and sediment control plan should include the following best management practices," FERC said:

• Implements surface water control measures to prevent construction-influenced water from flowing into karst features;

• Re-establishes ground surface contours and surface runoff patterns after construction;

• Prevents permanent blockage of karst features in order to maintain groundwater recharge;

• Sites equipment service areas outside of flagged buffer areas surrounding karst features;

• Where possible, provides a minimum of 100 feet of natural vegetated buffer area around a water body or karst feature;

• Uses double lines of silt fencing and/or straw bales upslope of water body or karst features or immediately surrounding the karst feature;

• Prevents the disposal of materials into karst features that could harm water quality;

• Avoids the discharge of hydrostatic test water in karst areas, if possible. If discharge of hydrostatic test water is necessary, water should be discharged into uplands as far as possible from flagged or marked buffer areas of karst features, and additional sediment and water flow control dissipating devices should be used to minimize impacts;

• Installs erosion controls around staging areas;

In areas along the exposed trench line comprised of sediment-filled, pinnacled karst terrain Dominion is to use a method that:

• Limits the amount of time the trench remains open by considering using modified construction procedures such as "laying ahead of the ditch" methods, where the pipeline is assembled in short segments prior to trenching, and then quickly installed and backfilled;

• Prevents stormwater overland flow from entering the trench;

• Isolates karst features in the trench with silt fencing and sandbags to prevent runoff from precipitation that falls within the trench from accumulating into the karst feature; and

• Mitigates and stabilizes the karst features prone to soil raveling and sediment migration by constructing reverse-gradient aggregate fill to stop soil and sediment migration to the subsurface while maintaining the groundwater-recharge functioning of these features.

In addition, Dominion should:

• Prohibit parking or idling of equipment for more than 12 hours within 100 feet of any karst feature; and refuel equipment within flagged buffer areas of karst features or areas draining into karst features only when approved by an environmental inspector and using hand-carried cans with a maximum capacity of five gallons.

The agency told Dominion to provide an updated 2016 Karst Survey Report and identify the karst features and their locations on the MNF and GWNF. Also, it must provide copies of correspondence with the federal and state agencies that indicates they concur with the proposed avoidance and mitigation measures in the plan."

Also, the agency said Dominion must identify whether it would implement the following measures to reduce the risk of impacts through landslide prone areas:

• Employ geotechnical inspectors to prescribe any additional mitigation for hazards that may arise; and conduct additional analysis of work areas should inspectors document tension cracks, slumping, erosion, or seeps, during construction and/or restoration.

The company must provide a landslide mitigation plan that describes the best management practices to be used in landslide/ debris flow prone areas and to maintain the structural integrity of the pipeline during operation. These practices should include:

• Dewatering the slope and working area using trench drains, berms, riprap, side hill low-point drains, water bars, water stops (trench breakers), and hard armor, especially along the toe of slopes;

• Excavation and regrading soils in steep slopes areas;

• Installation of the pipeline within bedrock;

• Slope monitoring during operation of the pipeline in areas of prior land sliding or where slope stability is considered uncertain.

"Based upon USFS comment that shallow landslides in West Virginia and Virginia commonly reach depths of three or more feet," FERC told Dominion to evaluate whether shallow landslides are more than a "low" level threat to the buried pipeline. Subparts to that directive included:

• Define the criteria used in the desktop analysis to identify depth and age of slope instability;

• Evaluate the potential for small, shallow slope instabilities, especially those downslope of the pipeline, to grow and migrate upslope;

• Assess the threat of landslides in the Mauch Chunk Formation (and equivalent rock units), which is susceptible to slides following heavy rain events. Include an evaluation of the June 2016 flood event and associated slides;

• Incorporate results of the Order 1 Soil Survey completed on USFS lands into the geohazard analysis;

• Provide analysis of instability hazard potential along existing and new access roads, cut slopes, and fill slopes on USFS lands;

• In addition to applying water to disturbed areas to control wind erosion, consult with experts and authorities to develop additional measures to control wind erosion, such as the applying mulch to disturbed areas.

Calling for public review

Dominion has indicated that about 95 percent of its project access road impacts would be permanent, the agency noted, adding the company should present the construction and operation impacts of proposed access roads by land use type, or provide justification for the need for the majority or all access roads to be permanently maintained.

"If all access roads would be permanently maintained during operation of the projects, describe how access roads would be maintained (e.g., mowing, herbicide application, gravel) and the process for monitoring and repairing access roads during operation of the facilities.

Dominion has "committed to providing site-specific crossing plans for special interest areas that would be closed during construction of the ACP," FERC said. "To promote review of these plans by the land-managing agency and public during the draft EIS comment period, file site-specific crossing plans" for the trails, including GWNF roads and trails.

Dominion should also describe how it would notify the public before crossing these features and provide evidence the crossing plan was developed in consultation with the landowner or appropriate trail steward.

If the plans cannot be provided in time to include with the draft Environmental Impact Statement, Dominion is to provide a schedule that explains when they would be available.

The company is also to identify by milepost where a narrowed right of way would be adopted to reduce impacts on forest land and ecologically sensitive areas within the Seneca State Forest, MNF, and GWNF.

In addition, Dominion is to provide updated construction impacts information for all applicable resources — land use, wetlands, soils, vegetation, cultural resources, etc. — affected by the changes to the construction right of way.