

The Recorder

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2017-05-25 / Top News

Steep slope plan ‘extensive,’ Dominion says

By John Bruce • Staff Writer



Dominion’s response to USFS’ request for information for construction and operations on steep slopes included a photo of a restored 24-inch diameter pipeline right of way in Pennsylvania. (Photo courtesy Dominion Energy)

MONTEREY — Dominion argued in a May 19 filing with the Federal Energy Regulatory Commission an earlier U.S. Forest Service request for information about the proposed Atlantic Coast Pipeline steep-slope construction plans was, in part, mistaken.

“The Forest Service describes its May 14 request as a ‘reiteration of previous information requests and discussions;’ however, the letter also includes requests for data that was previously provided to the Forest Service, data that is requested for the first time on May 14, 2017, and data that the Forest Service previously indicated is not required for development of the final Environmental Impact Statement, but would be incorporated in the construction, operation and maintenance plan.”

Dominion said it has developed “an extensive best-in-class program for management of construction on steep slopes” of the proposed 600-mile interstate 42-inch diameter ACP.

“The program is based on industry best practices and construction experience in a variety of steep slope terrains,” Dominion said. “It was first described in (Dominion’s) draft resource reports, and supplements the customary FERC-required procedures. This ACP program builds on the soils and geohazard analyses that have been conducted during project development. The BIC program ... was provided in more detail to the Forest Service on November 21, 2016. As detailed in these documents, the program establishes nine pre-defined categories of steep slopes for application of incremental measures above and beyond the FERC standards. For each identified category of steep slopes, there is a corresponding group of pre-defined, relevant potential mitigation tools.

“The BIC program in conjunction with the geo-hazard program has evaluated and classified the appropriate slopes along ACP’s proposed route. The BIC program includes protocol for expert review of each given slope to apply a selection of mitigation measures as appropriate to address the particular conditions found at that slope during construction. By establishing a robust set of tools and protocols in the BIC program, a consistent recognition of slope conditions and proactive techniques to ensure slope stability. (Dominion) recognizes that not every slope encountered during construction will be a direct match to the pre-designated BIC categories. For this reason, (Dominion) agreed that slopes-specific construction management plans would be developed in such cases,” the company stated.

“The (Forest Service) request relates specifically to two examples of slope-specific plans, referred to as Monongahela National Forest Site No. 1 and George Washington National Forest Site No. 2 ... Through extensive consultation with the Forest Service surrounding these two plans, they were identified as representative of sites that appear to present a high risk of failure, slippage or erosion and sedimentation and the parties jointly agreed on the approach to be taken for similar cases on Forest Service lands.

“By establishing the mitigation measures adopted in the slope-specific plans and by application of the BIC program to steep slopes that otherwise meet the established categories, (Dominion) will ensure compliance with relevant forest plan standards for soil and slope stability. (Dominion) looks forward to continuing its consultation with the Forest Service to complete the design effort for (the slopes), which Atlantic expects to incorporate into the construction, operation and maintenance plan.”

Asked to provide information regarding the effectiveness of techniques and materials the Forest Service requested, Dominion responded with photos showing it had repaired four slope slips after pipeline construction in West Virginia.

The Forest Service requested Dominion provide a narrative of conference calls in December 2016 and February 2017.

The narrative reiterated the forest service will require post-construction water quality testing at selected bleeder drain outlets. Locations will be selected by the forest service based on nearby

sensitive resources, and the USFS will provide the chemical parameters to be included in the testing. Dominion contended post-construction water quality testing is not required by federal, state, or local stormwater permits.

The USFS asked Dominion to evaluate the potential to pollute nearby streams and karst hydrologic systems, and prescribe sitespecific design techniques that will prevent the potential problems from occurring.

Dominion provided Geosyntec’s study to present results of the slope stability assessment and cut and fill volume calculations along a 0.3 mile section in Monongahela National Forest in Pocahontas County. “The avoidance and mitigation measures described in the erosion and sedimentation control plans include FERC and state required measures and BIC measures that exceed those requirements. These plans have been submitted to the State of West Virginia and are currently under review. These provisions have been developed over years of practical experience specifically in response to potential to pollute nearby streams and karst hydrologic systems,” Dominion said.

Dominion was asked to clarify which BIC techniques would be applied in specific locations within the forest service lands, provide a rationale for selection, and describe or depict the “multiple lines of defense” techniques mentioned during an April 11 field trip as a means of ensuring long-term success. “Currently the designs present lists of BIC techniques that may be used depending on the problems that are encountered, but the designs do not identify specific techniques or implementation procedures for specific conditions, hazards, or potential hazards,” the forest service said. “The forest service understands a certain amount of flexibility is needed to react to unexpected conditions that may be encountered during construction. However, site-specific designs should be based on a thorough evaluation of field conditions and information gathered from surveys so that the solutions to expected problems can be prescribed to prevent the occurrence of those problems. We want to avoid situations that require retrofitting a solution after a problem has occurred.”

Dominion replied it has provided “site-specific designs for two steep slopes along the ACP route, one in the MNF and one in the GWNF. Each of these designs identifies the site-specific mitigation measures that will be applied at that particular site. These two examples were selected by the Forest Service for site-specific design and mitigation development, to demonstrate the application of the BIC process as well as the potential site-specific slope stabilization measures.” Dominion said it will provide controls detail on a case-by-case basis, through its documentation of the implemented protocols at each steep slope.

Asked to describe short-term and longterm monitoring for high risk sites and sites that experience mass movement, Dominion said “during construction and until restoration is complete, all slopes will be monitored daily by experienced project environmental inspectors and geologist that are supporting construction activities.

“During operations, (Dominion) will monitor all slopes through routine aerial patrols on a monthly basis. In addition to the aerial patrols, foot patrols are also conducted periodically.

Additional monitoring requirements will be considered in the development of the COM Plan in conjunction with the Forest Service.”

The U.S. Forest Service asked Dominion to identify whether temporary spoils on steep side slopes include material excavated from the ridgetop for a winch pad.

Dominion referenced consultant Geosyntech’s paper stating, “Temporary spoils will be generated during excavation within the temporary and permanent right of way areas (collectively referred to as the ROW area) to create the temporary ground surface in preparation for pipeline construction (cut occurring on north side of ROW area), excavation of the pipe trench, and excavation for the winch pad at the top of the slope. We anticipate that the contractor will look to store as much of that temporary spoils within the ROW areas and extra work spaces on the slope, although our calculations suggest that some excavated spoils may need to be removed for off-site disposal. The temporary spoils remaining on-site will either be moved to the south side of the ROW area, where backfilling is needed to create the temporary ground surface for pipeline construction, or will be stored in stockpiles located within either of the two extra work spaces that straddle the ridgetop.”

Dominion provided its revised steep slope report, which touted its pipeline building experience and included an outline of pipeline projects completed in Appalachia, but none were 42 inches in diameter. Most were 24 inches.

“The approach and measures for mitigation of steep slope and erosion related hazards as proposed in the BIC program have been used in northwestern West Virginia, in particular in Marshall and Wetzel counties, which have similar geology, hydrology, and terrain (i.e. rugged, steep, and frequently wet and sensitive to disturbance) to the conditions observed at identified BIC slopes along the ACP project alignment ... The work was constructed in the 2013-15 timeframe and included new natural gas pipeline projects up to approximately 24 inches in diameter with varying overall project lengths of less than approximately 25 miles; and also included mitigation of numerous targeted steep and unstable slope and erosion related sites throughout an existing pipeline system,” the company explained.