

April 22, 2019

Mr. Matthew Gordon
Sunoco Pipeline, L.P.
535 Fritztown Road
Sinking Spring, PA 19608

Re: Hydrogeological HDD Re-Evaluation Report
U.S. Rt. 15 16" Horizontal Directional Drill Location (S2-0247-16)
Permit No. E21-449
Upper Allen Township, Cumberland County

Dear Mr. Gordon:

The Pennsylvania Department of Environmental Protection (DEP) is requesting more information from Sunoco Pipeline, L.P. (SPLP) related to the HDD Re-Evaluation for the U.S. Rt. 15 Crossing, HDD # S2-0247-16 and permitted under E21-449, posted on the DEP Mariner East II pipeline portal webpage on March 4, 2019.

1. As required by Paragraph 4.and 5 of the Environmental Hearing Board's August 10, 2017 Corrected Stipulated Order, SPLP failed to fully utilize information gathered during the HDD of the 20-inch bore as part of the HDD Re-evaluation for the 16-inch pipeline. Examination of the drilling record for the 20-inch pipeline boring indicates a persistent and significant loss of circulation (LOC) at approximately 673 feet and 1525 feet from HDD entry and an inadvertent return (IR) that began when approximately 1768 feet from the HDD entry. The HDD re-evaluation report should discuss the operational or geologic cause of each inadvertent return, the magnitude of the IR(s) and associated loss of circulation, the best management practice used to contain and minimize the IR, and the drilling procedure or technique used to progress the boring.
2. This information should then be used to describe why the chosen bore path for the 16-inch pipeline was determined and how such information has been used to minimize the potential for IRs to occur and as part of the discussion of construction alternatives.
3. Once the items discussed above are developed and by using the geophysical profiles, please attempt to predict where any operational provisions or changes may be necessary for the intervals where the previous LOCs or IRs occurred. Also, discuss any drilling intervals along the proposed 16-inch drill path where increased vigilance may be warranted, ie: the P.G. working in concert with the HDD contractor as sensitive geologic zones are approached by the drill bit.

4. In the re-evaluation report, please further discuss SPLP's monitoring procedure for detecting an IR and the standard operating procedures that are implemented upon the loss of circulation with special emphasis on how these provisions will minimize the occurrence and magnitude of an inadvertent return.
5. Geotechnical Evaluation – Un-named table on p. 7 (RETTEW report) lists the Compressive Strength for boring SB-02 at sample depth 19.0 ft. as 13,320 psi. This is 10x the reported compressive strength of any other boring tested. Please clarify if this value is correct and if so, please provide an explanation for the significant difference in compressive strength considering that the borings are located in the same geologic setting.
6. Figure 1 Topographic Base-map dated 11/17/2018 from the RETTEW report dated January 10, 2019 regarding "Geophysical Survey Sonoco Pipeline, L.P. Pipeline Project Horizontal Directional Drill S2-0247 – Highway 15 PA-CU-0176.0019-RD-16 Upper Allen Township, Cumberland County, Pennsylvania" for the HDD is incorrect. Figure 1 shows the location of a HDD in the area of intersection of I-76 and I-81. The subject of the report is the HDD in the vicinity of the intersection of I-76 and State Route 15. Please replace Figure 1 of this report with the correct base-map.
7. Please explain why SPLP considers LCMs to be less effective with increasing depth.
8. SPLP is reminded that drilling of any sort in a karst environment can induce subsidence sinkholes. The site geologist should be reminded to exercise vigilance for surface indications of sinkhole formation.

Upon receipt, DEP will post SPLP's response to this letter on the DEP pipeline portal webpage for public comment. The public will have 5 additional business days from the date of posting on the website to provide DEP any additional comment.

If you have any questions or would like to discuss this letter, please contact me at scwilliams@pa.gov or 717.705.4799.

Sincerely,



Scott R. Williamson
Program Manager
Waterways & Wetlands Program

cc: Larry Gremminger, Energy Transfer Partners, Sunoco Pipeline, L.P. (pdf copy)
Monica Styles, Sunoco Pipeline, L.P. (pdf copy)
Douglas Hess, P.G., Skelly and Loy
Matt Stough, Cumberland County Conservation District (pdf copy)