



November 15, 2019

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

Re: Hydrogeological HDD Re-Evaluation Report
Interstate 81 16" Horizontal Directional Drill Location (S2-0220-16)
Permit No. E21-449
Middlesex 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 Interstate 81 (I-81) Crossing, HDD # S2-0220-16 and permitted under E21-449, posted on the DEP Mariner East II pipeline portal webpage on February 27, 2019 and the supplemental HDD analysis submitted to DEP on June 17 and August 28, 2019.

1. The proposed 16-inch pipeline is proposed to be 20 feet or so deeper than the existing 20-inch pipeline. However, the geophysical report indicates that the proposed pathway will encounter problems just east of and near to the previous long-term, repetitive IR marked in the geophysical report as 10146+00. While going deeper passes the proposed drill path beneath the low velocity zone of the seismic survey, the other two geophysical surveys indicate that the drill path will still encounter problems. The resistivity survey shows the drill path passing through two "possible" fracture zones at that location. These were indicated by low resistivity readings indicating the presence of greater amounts of fluids, rather than rock. Thirdly, the microgravity survey indicated the area to be of a decreasing mass which is indicative of voids. Given the history of the drilling for the 20-inch pipeline at this location, and the additional analysis that SPLP conducted, it is clear that the risk of reactivating the IR at this location is high with the currently proposed 16-inch bore path. It is also clear that the drill path cannot go deeper.
2. Given the above circumstances and classification of the wetlands where the IR previously occurred, the Department requests that SPLP include requirements that SPLP staff, or a designated staff person, be constantly stationed to continuously observe the area of the previous IR when the drill bit approaches and drills through the high-risk area. To address this concern and as required by Paragraph 4. and 5. of the Environmental Hearing Board's August 10, 2017 Corrected Stipulated Order (Order) and the DEP/SPLP COA, dated June 27, 2017, SPLP must fully utilize information gathered during the HDD of the 20-inch bore as part of the HDD Re-evaluation for the 16-inch pipeline. It appears that

SPLP did not evaluate the information gathered during the 20-inch HDD to approximate the most high-risk zone where an IR may occur, nor did SPLP suggest increased visual monitoring that may be employed at this location. The Department is requesting that SPLP have the geologist/geophysicist examine the geophysical study and 20-inch pipeline drilling history to delineate the approximate distance from the entrance hole to where continual visual observation of the previous IR location at the ground surface will begin monitoring for IRs. In addition, SPLP should have their geologist/geophysicist identify the approximate point in the drilling profile at which the observer will stand down continual monitoring, presuming the HDD proceeds without incident, thus returning to only the normal monitoring for LOC and IR at HDD sites required by the DEP approved permits and associated plans.

3. Finally, the Department also has concerns about the drilling methodology used to accurately locate the drill bit while drilling is in process. This concern stems from a past discussion between the Department and the original contractor that was working the drill, who indicated that he was unable to accurately locate the bit. As SPLP is aware, there is more than one method of marking the progress of the bore-hole and at this HDD site, accurately locating the bit is essential to minimizing IRs at the site. DEP requests that SPLP confirm that the contractor will be able to accurately locate the drill bit's depth and horizontal location as drilling progresses.

The DEP's review of the geologic aspects of this HDD re-evaluation and the geologic related comments represented above were completed by a Licensed Professional Geologist.

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)