

March 28, 2019

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

Re: Hydrogeological HDD Re-Evaluation Report  
School House Road 16" Horizontal Directional Drill Location (S3-0091-16)  
Permit No. E38-194  
South Londonderry Township, Lebanon 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 School House Road site, HDD# S3-0091-16 and permitted under Permit E38-194, posted on the DEP Mariner East II pipeline portal webpage on February 21, 2019.

1. As required by Paragraph 4. and 5. of the Environmental Hearing Board's August 10, 2017 Corrected Stipulated Order (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. Please gather geologic and drilling information collected by various site personnel during the 20-inch bore that can be used to provide a summary confirmation of the geology at the site. This should include the full geologic profile from the drilling of the 20-inch HDD. The analysis should also evaluate how all of the available data has been used to minimize an IR from occurring as the proposed 16-inch pipeline intersects the zone around 30 feet below ground surface where SPLP has indicated the first IR occurred. The re-evaluation should also discuss and consider additional pre-cautions, such as casing-especially on the eastern side of the HDD path, that may prevent or further minimize the risks associated with potential inadvertent returns (IRs) on entry and exit activities of the HDD in the overburden.

This information should then be used to further 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, including why HDD activity is still the preferred and chosen methodology for pipeline construction at this location. Within the construction alternatives analysis, please provide an evaluation and discussion of other trenchless methodologies and why they are not a feasible alternative to HDD.

2. Relating to the Analysis of well production zones and use of information obtained during construction of the 20-inch pipeline:

The re-evaluation report fails to include evaluation of the information and any data collected for the six private water supplies within 450 feet of the HDD. Additionally, the report does not explain how the redesign will greatly reduce the risk of IR's or protect water supplies, especially since it appears the redesign was done in November 2018 and the water supply information wasn't completed until February 2019. It is also unclear about whether any of the six water supplies are the same as any of the twelve water supplies within 0.5 miles that were identified from the PaGWIS database.

Any private or public water supply data obtained within 450 feet or otherwise obtained in the vicinity of the 20-inch or proposed 16-inch HDD should be used and discussed as part of this HDD re-evaluation, specifically in the evaluation of the HDD's potential to impact the water supplies within 450 feet of the HDD. This data should include but not be limited to any applicable water supply sampling data and any water supply complaints that SPLP may have obtained and received for water supplies within 450 of the HDD or within the general vicinity during construction of the 20-inch pipeline. The results of the SPLP's water supply sampling program, investigation, disposition of a complaint, and any correlation or non-correlation to SPLP's construction activities should be evaluated and discussed in the HDD re-evaluation report and used to demonstrate that the proposed 16-inch HDD activity will minimize the potential for IR's and impacts to water supplies. Please revise the re-evaluation report to include this information.

3. Relating to the Analysis of geologic strength at profile depth and overall geologic and hydrogeologic report:
  - a. There is no analysis in the re-evaluation report specifically tying the revised drill path to any specific zones noted on the core boring logs, or why the revised 16-inch path was chosen. Three of the four core borings are not deep enough to analyze geologic strength at the proposed 16-inch pipeline depth. The fourth core boring is approximately 850 feet to the northeast of the HDD alignment. Additionally, weathered and very poor strength rock appears to be present at the 16-inch pipeline depth. Please provide an analysis that addresses the use of this data in designing the bore path and how it has been used to minimize the potential for IRs to occur or impacts to water supplies to occur.
  - b. Provide an explanation and discussion of why no new core borings were performed as part of the 16-inch pipeline bore path design, especially in consideration that only one of the previous core borings was performed to a depth at or deeper than the depth of the proposed 16-inch bore path and that three of the four core borings were not near the proposed 16-inch pipeline depth.
4. Given the close proximity of the proposed 16-inch bore path to the constructed 20-inch pipeline, please discuss and address any concern related to communication between the two

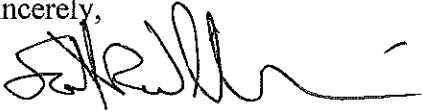
bore paths and the potential for IRs or water supply impacts to occur from any potential communication.

5. The SPLP Re-evaluation report (pg. 6) states: "During all drilling phases, the use of Loss Control Materials (LCMs) will be implemented upon detection of a Loss of Circulation (LOC) or indications of a potential IR are noted or an IR is observed. The use of LCMs, however, is less effective below 70 ft of the ground surface." Provide an explanation of the statement "The use of LCMs... is less effective below 70 ft of the ground surface".

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](mailto: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)  
Doug Hess, P.G., Skelly and Loy  
Karl Kerchner, Lebanon County Conservation District (pdf copy)