



March 28, 2019

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

Re: Hydrogeological HDD Re-Evaluation Report
Old. U.S. 220 16" Horizontal Directional Drill Location (S2-0109-16)
Permit No. E07-459
Blair Township, Blair 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 Old U.S. 220 site, HDD# S2-0109-16 and permitted under Permit E07-459, posted on the DEP Mariner East II pipeline portal webpage on February 13, 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. Please gather geologic and drilling information collected by various site personnel during the 20-inch bore which can be used to synthesize a comprehensive analysis of how all data was used to design the proposed 16-inch bore path. The HDD re-evaluation report should discuss how the operational or geologic cause of each inadvertent return, the magnitude of the inadvertent return(s) and associated loss of circulation, the best management practice used to contain and minimize the inadvertent return, and the drilling procedure or technique used to progress the boring were considered in the proposed 16-inch redesign.

Additionally, the report does not explain how the redesign will greatly reduce the risk of IR's or impacts to water supplies within 450 feet, especially since it appears the 16-inch HDD redesign was done in Jan 2018 and the Geologic Report wasn't completed until Feb 2019.

This information described above should 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 IR's 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.

2. Relating to the Analysis of geologic strength at profile depth:
 - 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. Please provide a discussion addressing the use of this data in designing the bore path.

- b. Provide an explanation and discussion of why no new core borings were performed in the area of the first IR, especially in consideration that only one of the previous core borings was performed in proximity to the depth of the proposed 16-inch bore path.
3. Relating to the consideration of Overburden Strength Analysis: The geologic report provides a description of soils underlying the site but does not include any analysis or discussion of the overburden strength. Please provide additional information/discussion to address the consideration of overburden strength analysis, especially in the area where the first IR occurred, as per the requirements of paragraph 4 ii of the EHB corrected and stipulated order.
4. Relating to the Open Cut Alternatives discussion: The open-cut and conventional bore analysis refers to the preferred use of "Direct Pipe" at this location. While other parts of this discussion refer to HDD. It is unclear whether SPLP is proposing to use a HDD or a "Direct Pipe" (aka: micro-tunneling) on all or part of the Old US 220 Highway Crossing. SPLP should clarify the pipeline installation methodology proposed this section and any other applicable sections of the report.
5. Relating to the Re-route analysis/evaluation included: SPLP's Re-route analysis mentions a high-voltage electrical tower right-of-way exists parallel to the proposed 16-inch HDD to the south. SPLP does not discuss in any detail whether they explored using this "right-of-way". Please provide analysis and discussion of using this "right-of-way" and why it was eliminated as an option.
6. Relating to the overall Geologic and Hydrogeologic Report:
 - a. The Geologic Report section 2.0 Geology and soils does not appear to be correct for the Old US 220 Highway Crossing site and may be referencing/referring to another HDD site.
 - b. The Geologic Report 4.0 Fracture Trace Analysis mentions eight fracture traces were identified and are shown on Figure 2 and 3 of the report. Figures 2 and 3 of the report only show one inferred fracture trace.
7. 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 five private water supplies within 450 feet of the HDD. It is also unclear about whether any of the five water supplies are the same as any of the three 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. 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 the 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.

8. Related to Pipe Stress Radius: Provide further explanation of how the following statement applies to this HDD re-evaluation: "Pipe stress allowances are an integral part of the design calculations performed for each HDD."

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)
Doug Hess, P.G., Skelly and Loy
Blair County Conservation District (pdf copy)