

**DEP Permit # E65-973
DEP Permit HDD Reference # PA-WM2-0093.0000-RD-16
DEP HDD # S2-0016
Township – Derry
County - Westmoreland
HDD Site Name – Livermore Road Crossing**

1st Public Comment Period

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1. Comment

Pursuant to the Corrected Stipulated Order entered on EHB Docket No. 2017-009-L on August 10, 2017 (“Order”), and on behalf of Clean Air Council, Mountain Watershed Association, Inc., and the Delaware Riverkeeper Network (“Appellants”), please accept these comments on Sunoco Pipeline L.P.’s (“Sunoco”) re-evaluation report (“Report”) for the horizontal directional drilling (“HDD”) indicated by drawing number PA-WM2-0093.0000-RD-16 (the “HDD Site”).

1. It is not clear that at-risk drinking water supplies have been fully inventoried and protected.

Sunoco asserts it has used the PaGWIS system to identify drinking water supplies up to a half mile out from the HDD alignment and surveyed landowners within 450 feet of the alignment. This is a reasonable start, but the geology at the Site warrants additional efforts to identify and protect water supplies. It is also important that all at-risk wells be

tested before, during, and after drilling for the 16-inch line at the Site. It is not clear that is Sunoco's plan.

The fracture trace analysis shows that multiple large fractures bisect the HDD alignment, some up to a mile long. Such fractures can serve as preferential pathways and transport drilling fluids even beyond the half mile radius Sunoco searched. This is particularly concerning since one of the inadvertent returns that emerged during the construction of the 20-inch line flowed continuously throughout the duration of that construction. Thus, not only does the geology of this Site mean drilling fluids could potentially travel much farther than Sunoco has accounted for, it also means that IRs can last for extended periods. The longer an IR flows, the longer drinking wells and the surrounding groundwater system are potentially exposed to drilling fluid infiltration and other disruption. Though Sunoco intends to implement improved protocols for responding to loss of circulation, those protocols cannot replace a thorough inventorying of wells that might be at risk. The PaGWIS search for this Site only revealed two wells within a half mile of the alignment while landowner outreach revealed three wells just within 450 feet of the alignment. Residents in the vicinity of the fractures and any other area of potential hydrogeological connectivity should be contacted directly by Sunoco and offered water testing, even if that means knocking on doors beyond the 450-foot radius.

It is important all wells are tested before, during, and after drilling construction of the 16-inch line. Sunoco indicates that it tested a few wells before and after completion of the 20-inch line. Those results did not show the wells had been harmed by construction of the 20-inch line, leading Sunoco to conclude the construction of the 16-inch line will pose little risk to water supplies. It is unclear whether Sunoco intends to perform additional testing of those wells in conjunction with the construction of the 16-inch line or if it is hoping to rely just on the previous test results. Relying on just the previous tests would be inappropriate and dangerous. Testing performed in relation to the 20-inch line is helpful as it can serve as a baseline for comparison, but Sunoco must perform additional testing to ensure the water supplies remain safe during and after the construction of the 16-inch line, which poses a new and separate threat to the local hydrology.

2. The BMPs Sunoco plans to implement at the Site do not account for the recommendations of its experts.

While Sunoco has revised the profile for the 16-inch line, making it deeper, this is unlikely to prevent IRs given the vertical fracturing of the bedrock. If HDD is to proceed safely at the Site, BMPs are especially important. Yet, Sunoco has not adopted the recommendations from the Hydrogeological Report. Of the BMPs it does propose to implement, it is not clear which BMPs were used—and failed—during the construction of the 20-inch line, which resulted in multiple IRs, and what will be different this time around.

Sunoco's geologists recommend "reducing drilling fluid density to maintain a clean borehole and control annular pressure." The Report, on the other hand, indicates Sunoco will "monitor

drilling fluid viscosity, such that fissures and fractures in the subsurface are sealed during the drilling process.” Reducing drilling fluid density is not the same as monitoring drilling fluid density. Sunoco should explain the discrepancy in its plans. Sunoco’s geologists also recommend “[s]uspending drilling activities and performing an assessment at the initial sign of fluid loss,” and “[s]queeze grouting’ before resuming after an LOC.” Sunoco, without explanation, did not adopt either of these recommendations. It does discuss grouting using “neat cement” but is unclear if this is same as “squeeze grouting.”

Overall, Sunoco’s proposed BMPs sound much like the measures that is has claimed to employ all along. Clearly, that strategy has been ineffective. The Department should request more detail from Sunoco about the measures it will use and what will be different. The Department should also refuse to accept unspecific commitments like “enhanced” monitoring. What exactly was the monitoring protocol before? Why did it not work? How will it be improved here? Similarly, simply providing the drilling crew and inspectors with information about the high-risk areas and potential fracture zones is unlikely to produce protective results. The crews, which are almost all from out of state and with limited experience of the geology encountered in Pennsylvania, need to be trained in how exactly to proceed when approaching a high-risk area, and how exactly to respond when there is a problem.

3. Sunoco should clarify which procedures it is using to prevent and mitigate loss of circulation.

There are multiple references in the Report to standard LOC procedures implemented in the “summer of 2018.” The HDD IR PCC Plan that Sunoco is bound by order of the Environmental Hearing Board to follow is from April 2018. The Board’s Stipulated Order of April 16, 2018 provides: “No changes, additions, modifications, or amendments of or to the April 2018 IR PPC Plan shall be effective unless they are set out in writing, agreed to by all Parties, and incorporated into an order of the Board.” Sunoco must clarify if the LOC procedures it has been following and intends to follow are indeed from the April 2018 HDD IR PCC Plan or if it has changed the procedures that were agreed upon by Sunoco, the Department, and Appellants, and ordered by the Board.

Thank you for considering these comments. Please keep us apprised of your next steps on the HDD Site. (1-5)

Letter – [Clean Air Council – Livermore Road Crossing – 2-15-19](#)