October 25, 2019

<u>By Email</u> ra-eppipelines@pa.gov kyordy@pa.gov



Re: Comments on Report for HDD PA-DE-0008.0000-RD (HDD# S3-0560)

To whom it may concern:

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 indicated by drawing number PA-DE-0008.0000-RD.

1. Sunoco does not disclose whether the new plans are for an intercept drill, the type of drill the caused serious problems and borehole abandonment during installation of the 16-inch line.

The proposed profile will pass through Baltimore Gneiss, a formation known for heterogeneous rock that can lead to difficulties in drilling and steering. Indeed, the HRR at Section 3.1 describes how Sunoco initially planned to install the 16-inch line after drilling an intercept-drilled borehole. However, the bores from opposing ends did not connect, and then the drilling caused IRs. "Due to alignment issues, both bores were abandoned and beginning on 11/7/17, a new continuous and complete pilot was drilled the full length of the planned HDD."

Despite this troubled history, Sunoco fails to disclose whether its new plans are for an intercept drill. If they are, special precautions should be taken to ensure more boreholes are not created that cause spills, need to be abandoned, double the needed drilling, and needlessly riddle the subsurface with more cavities. Indications are that the plans *might* be for an intercept drill. The Profile View refers to the as-built 16-inch HDD termini as "entry" and "exit" separately, but the 20-inch termini as "entry/exit." These tea leaves are not enough. Sunoco needs to be clear about its plans and then what it intends to do to mitigate the risk. The Report lacks clarity.

2. Sunoco has not accounted for steering challenges associated with local geology.

Regardless of whether the new plans are for an intercept drill, issues concerning steering are still likely to arise. At other HDD sites where Baltimore Gneiss was encountered, Sunoco's

geologists made specific recommendations for how best to proceed, including recommendations regarding drilling rate and pressure, and to use a diamond bit. The Department should ensure that an appropriate plan is in place to avoid and mitigate steering difficulties here.

Steering issues would be particularly concerning due to the wells very close to the alignment, including one only 10 feet away.¹ When a well is this close, additional concerns arise. Appellants presume 10 feet distant means 10 feet from the centerline, i.e. within the permanent easement bounds. What additional measures will Sunoco take to protect this well from aboveground interference relating to the pipeline construction and maintenance?

Also, given the steering issues, there should be thought given to ensuring that the HDD does not intersect and blow up one of the two existing Sunoco pipelines that run parallel to the alignment. The Report does not discuss them. There is no indication of what depth they are buried to. There is no indication whether they are operational. It could be disastrous if Sunoco drills into an existing operational line.

3. Sunoco appears to be misinterpreting the geophysical surveying results and not incorporating them into its plans.

Sunoco may be misinterpreting the geophysical surveying results. It writes "The MASW survey identified low velocity zones indicating potential fracture or fault zones at approximately stations 6+50 and 12+87." Station 12+87 corresponds with the eastern terminus of the eastern terminus of the geophysical survey. Station 6+50 corresponds with the eastern terminus of the middle Spread 3 of the geophysical survey. A comparison of the summary narrative of the geophysical report with its Appendix-1, however, demonstrates that each identifies only one low velocity zone: the narrative speaks of a low velocity zone "at the southeastern end of the HDD" without listing a station, and the Appendix-1 identifies a low velocity zone at the eastern terminus of Spread 3. Appellants' best guess is that the narrator of the report results misread the eastern terminus of Spread 3 as the eastern terminus of the HDD; thus there is probably only one low velocity zone, which is in the middle of the HDD, not the eastern end. The geophysics report should be amended for clarity.

Sunoco then likely misread the report to be speaking of two separate low velocity zones. It correlates the phantom low velocity zone at the eastern end of the HDD with the IRs it experienced there, writing "These two IRs are in the same general location as the low velocity zone identified at Station 12+87." Sunoco's analysis should be amended in light of this mix-up.

Furthermore, it is not apparent from the Report that Sunoco took the geophysical survey results into account in redesigning its HDD plans for the Site. This is error and the Department should require Sunoco to correct it.

4. The plans should be revised to clearly delineate high risk areas and bedrock.

¹ The table from which this number is drawn, in Figure 5 to the HRR, is so small to be nearly unreadable. It should be produced in a clearly legible format.

The results of the geophysical surveys indicate a low velocity area that presents a risk of inadvertent returns and LOCs. These results should be juxtaposed with a cross-sectional view of the proposed 20-inch line so the highest risk areas can be readily identified. In order for everyone working the site to make the best use of the information gathered in the geophysical surveys, this information should be incorporated into the technical drawings that will actually be used on site. Sunoco states it will share the results of the fracture trace analysis with the crew, but the geophysical survey data is more robust and accurate. Sunoco should make a specific response plan now instead of waiting for IRs to unfold. In addition, the cross-sectional view of the planned 20-inch profile should include the approximate bedrock depth. The Plans and Profiles in Attachment A to the Report do not currently show depth of bedrock.

5. Water well protection planning and data is absent from the Report.

As noted above, these are several water wells very close in to the alignment. The HRR says that the water supply owners were offered testing for their wells and their wells were "tested," but it provides no details, including about timing. Thus the public and the Department are in no position to determine whether Sunoco has or will comply with the water well testing requirements of the Order. Nor does the Report provide a plan for protecting these wells. The Report will not be complete until those risks are fully addressed and a plan to protect the wells is in place.

The Department should ensure that Sunoco does not begin drilling until that testing is complete. The Department should also ensure water testing results are included in the Report. At this point, no well testing data for any of the wells has been disclosed in the reevaluation process. In previous Reports, when pushed by the Department, Sunoco has provided summary test result tables, but has also included inaccurate generalizations about readings for relevant test parameters. For accountability, the results themselves, or summary tables, should be incorporated here.

6. The Report lacks several other needed items.

Besides the deficiencies identified above, the Report lacks a few more needed items.

First, while Sunoco says that "Three (3) IRs occurred during construction of the 16-inch line," it later admits that that does not include "a few small upland IRs." The total number of IRs that occurred at the Site is thus undisclosed, and data about the additional IRs that are merely grouped together is absent.

Second, HRR Section 3.1 states: "A pathway created by abandoning the initial pilot hole and pilot intercept may have contributed to IR-3." The Report does not indicate that Sunoco has a plan for avoiding another IR through this pathway. The Department should require some sort of plan to mitigate this known risk.

Finally, Sunoco plans to bore directly below buildings in the path of the alignment. Besides preventing visual inspection of the surface above the pipeline, this heightens the risk that IRs or product spills would end up in the structure itself. Sunoco should have a plan in place to deal

with that risk. An IR occurring within the structure will not be detectible by patrolling the area. Has Sunoco discussed this risk with the landowner and put in place any system to monitor for incidents appearing within the building? If so, that is not apparent from the Report. The Department should require Sunoco to commit to some plausible monitoring and mitigation plan.

Thank you for considering these comments. Please keep us apprised of your next steps on the HDD Site.

Sincerely,

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