January 16, 2018

By Email

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Re: Comments on Report for HDD PA-CA-0023.0000-RD and PA-CA-0023.0000-RD-16

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 this comment on Sunoco Pipeline L.P.'s ("Sunoco") re-evaluation report ("Report") for the horizontal directional drilling ("HDD") indicated by drawing numbers PA-CA-0023.0000-RD and PA-CA-0023.0000-RD-16 (the "Site"). 1

## The Department's Review

Pennsylvanians rely on the Department of Environmental Protection to protect them from dangerous activities that threaten their air, water, land, and health. The Department has recognized that the construction of Mariner East II has done damage to the public already.

The Order reads, in pertinent part:

§ 6(ii) For all recommendations for which a minor permit modification is required, including, but not limited to, certain changes from HDD to an open cut or certain changes to the Limit of Disturbance ("LOD"), the Department will have 21 days to review the submission and render a determination with respect to such minor permit modification, unless Sunoco agrees to extend the 21-day time period. Appellants and private water supply landowners, who have received notice pursuant to Paragraph 7 below, shall submit comments, if any, within 14 days of the Department's posting of Sunoco's Reports on the Department's Pennsylvania Pipeline Portal website...The Department shall consider comments received and document such consideration." Emphasis added.

<sup>§ 6(</sup>iii) "For all other recommendations, including, but not limited to, recommendations of no change or of changes that do not require a minor permit modification, the Department will have 21 days to review the submission and render a determination with respect thereto, unless Sunoco agrees to extend the 21-day time period. Appellants and private water supply landowners who have received notice pursuant to Paragraph 7 below, shall submit comments, if any, within 14 days of the Department's posting of Sunoco's Reports on the Department's Pennsylvania Pipeline Portal website... The Department shall consider comments received and document such consideration." Emphasis added.

The purpose of Sunoco's re-evaluations of certain HDD sites is so that it does a better job avoiding harm to the public and the environment in its HDD construction. The Department's role is to review and assess Sunoco's Report before deciding what action to take on it.

It is the Department's duty to review and assess the Report with protecting the public and the environment placed first and foremost. Looking at the individual circumstances at the site in question is key. Critically important is accounting for input from those who live nearby, who have a deeper connection with and greater knowledge about the land than the foreign company building the pipelines through it.

A meaningful, objective and substantive review and assessment by the Department will ensure that new or further HDD operations at the re-evaluated sites will cause minimal, if any, harm to the public and the environment. Anything less than a full, careful, and objective review would endanger the public and the environment. Pennsylvanians place their trust in the Department to do a thorough, science-based assessment, taking into account these and other comments, and approving Sunoco's recommendation only if it would protect the public and the environment from any further harm.

### Comments on HDD PA-CA-0023.0000-RD and PA-CA-0023.0000-RD-16

## 1. Sunoco does not adequately address risks to water supplies.

Sunoco identified 32 individual landowners within 450 feet of the alignment but has so far only confirmed the presence of private well water on ten properties. Three of those wells are within 100 feet of the HDD alignment. Sunoco claims, without any scientific support, that only water supplies within 150 feet may be affected by its drilling operations. Yet wells beyond that radius of 150 feet have already been contaminated by Sunoco's HDD for Mariner East 2. For example, Scavello's Car Care in Exton, PA had its water contaminated at a distance of about 450 feet from Sunoco's drilling.

### The Report states:

"The HDD is an active 'pressure event' in the aquifer that pushes upon the static ground water and at minimum could agitate settled sediments within the water bearing zones, or could result in transport of diluted drilling fluids towards the withdrawn zone for individual wells. As a result, active well use during HDD activities potentially could result in the uptake of turbid water. While this does not present a health hazard, it can be unsightly to users and could affect."

These claims are problematic in a number of ways. First, Sunoco's claim that a well's uptake of turbid water "does not present a health hazard" and is only "unsightly to users and could affect taste" is patently false. Bacterial contamination is known to result from drilling fluids or sediment contamination in drinking water. In fact, water contamination from Sunoco's HDD has already caused bacterial contamination in wells of residents in Exton, PA and in Berks County near the Joanna Road HDD Site. The resident by the Joanna Road HDD Site experienced severe health problems due to the contamination and previously commented to the

Department on the re-evaluation.

Sunoco's suggestion to deal with the problem is not to build the pipeline in a more protective manner, but rather "to encourage landowners to make advance arrangements for the supply of alternative water sources as necessary during the HDDs." Residents nearby Sunoco's operations should not bear the burden of dealing with the consequences resulting from illegal conduct such as Sunoco's pollution of their wells. They are innocent bystanders. The Department has a legal obligation to not permit illegal pollution such as water well contamination, and may not approve construction techniques that are likely to result in such contamination. Considering that at least one well is only 25 feet from the alignment, it is critical that Sunoco notifies landowners of the risks to their water supplies and what they can do to decrease that risk.

There is also some contradictory information about wells that were identified. In its summary, Sunoco states that:

"Eight domestic supply wells and one spring have been identified within, or close to, a 450-foot perimeter drawn around the HDD alignments. The range of well depths for those wells is 20 to 80 feet. On the revised profiles, the HDDs are planned to run approximately 74 and 94 ft bgs, for the 20-inch and 16-inch, respectively, within this range of well depths."

But the hydrogeological report also finds that:

"The Pennsylvania Groundwater Information System (PaGWIS) reported six wells within 1,000 ft of HDD S2-0070. Four of these (PA Well IDs 81845, 81846, 81847, and 81848) are given the same latitude and longitude for a position approximately 350 ft north of the LOD along the western part of the alignment. All four wells were completed between 106 and 250 ft bgs and reported within the Conemaugh Group. Static water was reported in three wells from 91 to 216 ft bgs, the latter being from the deepest well.

It is unclear if the six wells identified by PaGWIS are considered by Sunoco in addition to those identified by landowners or if they are not considered at all in Sunoco's reevaluation. Those wells identified by PaGWIS may be significant and it is important that Sunoco clarify how they are taken into account. The PaGWIS results found that the wells were between 106 and 250 ft bgs and this HDD reevaluation may not circumvent that aquifer because the revised HDD plan appears to run 97 feet below ground level at its deepest point. The Report even says that "[t]he production intervals of local water supply wells overlap the position of the HDD boring profile."

Sunoco must do more to identify and prevent impacts to water supplies.

## 2. Sunoco relies on insufficient geotechnical information, and outdated areal data.

For this reevaluation, Sunoco completed an additional sample bore roughly 200 feet from the eastern entry exit point. However, instead of conducting a geotechnical boring near the western entry/exit, the Report refers to borings completed 2014. The Report includes reference to three geotechnical "SB" soil borings, the closest of which is approximately 1,600 feet from the

proposed western entry/exit. The measure is approximate because no exact location of these geotechnical boring samples are given, which makes their significance even more difficult to discern. It is impossible for the Department and Appellants to make a determination about the Site reevaluation without this critical information. The Report even states that "it is unknown what soil texture conditions exist at the western entry/exit as no geotechnical borings were advanced near that location."

Similarly, it its adjacent features analysis, Sunoco seems to rely on a desktop-only assessment that is based on aerial photography from 2015. At a minimum, Sunoco should do a field comparison of the data it used to present conditions to ensure important features and changes have not been missed.

# 3. Sunoco did not address the relevant findings of the report such as mine pools and soils associated with IRs.

The Report reveals significant findings such as the existence of nearby mine pools and the presence of alluvium, which Sunoco says correlates with IR's--but the findings are not addressed.

Throughout the hydrogeology report, the issue of the nearby mine pools is raised but goes unaddressed in Sunoco's ultimate reevaluation. Sunoco's scientists point out that an abandoned deep mine, Bethlehem Coal Corp., Mine 31, is located only 200 feet from the site. They go on to say that, "according to PADEP, mine pools are known to exist within Mine 31, north of the proposed HDD (see Figure 4) and south and east of the HDD in Mine 72 and Mine 77, respectively."

The hydrogeology report recommends that Sunoco should "account for any adverse effects [that] a large volume loss of drilling fluid return (LOR) would have from raising the water level in local and regional mine pools." Sunoco ignores this recommendation. The hydrogeology report also clearly states that "HDD installation procedures need to prevent any adverse effects on mine pool levels." This signifies that site specific installation procedures should be implemented in order to prevent and mitigate IR's. The adoption of such site specific procedures in turn, prevents the possibility of new mine discharges. But no specific installation procedures are mentioned other than boilerplate best management practices.

Not only is the Report silent as to how Sunoco will prevent IR's from impacting the mine pool, but there is also no mention of other critical data needed in order to successfully prevent such impacts. For example, there is no mention of what the mine pool elevation is estimated to be and more specifically, where it is located. For example if there is only a 200 foot barrier between the mine pool and the HDD, especially in an area that is so heavily fractured, seems entirely inadequate. Additional information is critical in order to best avoid impacts.

Even though the Report alleges it is unlikely that an IR with a large enough volume to impact the mine pool would occur, the creation of a new mine discharge—especially one in a headwaters that feeds into a reservoir—would be devastating. Remediating such a discharge would take years and an enormous amount of resources. Sunoco has already caused several high volume

IR's throughout the state and the threat of additional such spills here must be addressed and prepared for.

Sunoco's Report links IR's to certain site conditions. Here, Sunoco mentions that one of those conditions is present but does nothing to address that fact. The Report states:

All of the IRs to date in Spreads 1 and 2 for the ME II pipeline to date have occurred while drilling through the cyclic sequences of sandstone, shale, limestone, clays seams and coal present within western Pennsylvania bedrock formations, including the Allegheny Group, Casselman Formation, Glenshaw Formation, Monongahela Group, and Waynesburg Formation. Entries and exits pass through alluvium, colluvium and soils developed on top weathered bedrock and mine spoils. In general, the IRs have been related to shallow overburden (especially under water bodies), large elevation changes between entries and exits, coarse grained unconsolidated materials near the surface (such as alluvium and mine spoil), and the interconnectivity of open bedrock structural features that is difficult to predict.

The Report goes on to only briefly indicate that there is alluvium at the site: "Given this is a groundwater discharge zone, the water table is shallow at some locations and occupies unconsolidated alluvium associated with the Hinckston Run flood plain." Considering the correlation with IR's, more of an exploration is warranted. However, since no geotechnical borings were completed near the western entry/exit point "it is unknown what soil texture conditions exist."

It seems very likely that the entry and exit for this site pass through alluvium which is a condition often associated with IRs. More information must be gathered before the site can be safely drilled.

#### **Conclusion**

For these reasons, Appellants request that this proposal not be approved unless and until Sunoco provides the important additional information described above for the Department and the public to consider.

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

Sincerely,

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