May 26, 2018

By Email

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Re: Sunoco's May 21, 2018 letter regarding PA-DE-0046.0000-RD

Dear Mr. Hohenstein:

On May 21, 2018, Sunoco submitted a letter to the Department in response to the Department's March 23, 2018 request for additional information regarding horizontal directional drilling ("HDD") Site PA-DE-0046.0000-RD ("Site"). 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"), we respectfully submit these comments in reply. Our comments mirror point by point (for most points) the requests and responses from the Department and Sunoco.

Points 1 and 2 (surface geophysics and borehole geophysics)

Sunoco argues that it need not determine the bedrock depth at locations besides the specific points where it performed geotechnical bores because "the five geotechnical bores demonstrate that both profiles will be located significantly below the top of bedrock across the entire run of this HDD." This conclusory statement is speculative. The composition of the rock sampled across the five sites differed both in composition and depth. The distance between some of the bores amounted to around a thousand feet. Substantial changes in geology can occur between points a thousand feet from each other.

Sunoco similarly dismisses the Department's recommendation to employ additional geophysical and geotechnical testing to gather information on local fracture sets and preferential pathways. Sunoco argues that drilling additional bores would create new preferential pathways, but ignores the possibility of downhole geophysical methods that might be able to gather additional information from existing boreholes. Sunoco's argument also ignores the fact that surface geophysics can be employed to better understand these features without presenting the risk of creating additional pathways for fluid migration.

The Department should continue to require surface geophysics to determine depth to bedrock and the use of downhole geophysics and surface geophysics to evaluate fractures and

preferential pathways.

Points 4 and 5 (Sunoco's consideration of recommendations from GES Report)

The GES Report accompanying Sunoco's re-evaluation report ("First Report") sets forth a set of recommendations made by the Professional Geologist for moving forward with HDD at the Site. The Department has asked Sunoco to follow these recommendations. Sunoco has taken the Department's instruction as mere suggestion.

With respect to subpoint 4.d, in which the Department requests detailed, site-specific monitoring plans, Sunoco writes, "the location of the drilling tools when an IR event occurs has not had a direct correlation to date." Sunoco appears to be suggesting that the entrance of the drill bit into an area of concern is not a concern. Clearly, however, it is. Moreover, Sunoco's statement does not respond to the Department's concern. Sunoco should follow this instruction.

With respect to subpoint 4.e, the Department should require the requested analysis to be performed. Sunoco does not identify the specific points of potential weak bedrock and soils that the Department requests Sunoco identify. It says it will discuss those "ahead of drilling, with a plan devised to address such zones." But it wants approval to start the HDD before it does so, for a reason it fails to explain. If Sunoco can do this now, it should do this now. Otherwise, Sunoco is merely dangling the carrot in front of the Department without any commitment.

Sunoco's responses to the Professional Geologists' recommendations are in some instances dismissive. Sunoco's response to recommendation 1 is that it has a different plan for controlling excess groundwater. That plan does not do some of what the Professional Geologist recommended. Sunoco makes no attempt to explain why ignoring its PG's advice is wise.

Sunoco says recommendation 6 is "addressed by multiple HDD best management practices. Part of it is, part of it is not. No BMP identified in the First Report addressed identification of "unconsolidated horizons characterized with low cohesive overburden." Sunoco makes no commitment to do anything about that.

The Department should require Sunoco to actually commit to following the recommendations, which are sensible, as it originally requested.

Point 7 (150-foot "impact area")

Sunoco claims that its "previous statement concerning the potential effects within 150 ft is now moot" due to the Consent Order & Agreement. This is both incorrect and troubling because Sunoco is failing to provide documentation to confirm questionable statements it has made to the Department, and is failing to conduct an actual hydrogeological analysis of the Site, as required by the Order. Sunoco's statement is incorrect because the provision of a temporary water supply does nothing to protect the private water supplies. It may stave off harm to landowners' health during the course of the drilling, but still leave them with damaged or destroyed water supplies. Further, damage to a well affects the value and livability of the home, no matter the temporary band-aid provided.

There is no sound hydrogeological basis for claiming that water supplies are only at risk within 150 feet of the HDD alignment. But because it was convenient here, Sunoco made that representation to the Department. Having been called on its misrepresentation, Sunoco wants to brush it aside rather than own up to the fact that it made statements to the Department for which there is no justification. Appellants believe it is important for the integrity of the administrative process that the Department not let Sunoco get away with submitting falsehoods to the Department as truths.

As importantly, Sunoco needs to have done a scientifically valid hydrogeological evaluation of the Site. Sunoco withdrawing its very specific conclusion related to the critical issue of which wells might be impacted raises serious questions about the validity of its other scientific and hydrogeologic conclusions. The Order is not moot regardless of the Consent Order and Agreement. The Order requires scientific analysis including "analysis of well production zones." These analyses need to be accurate and scientifically defensible. As it stands, neither the Department nor the public has any way of knowing how many wells may be impacted.

Point 10 (onsite presence during critical drilling phases)

Sunoco has not addressed the recommendation that "DEP regional staff will be provided with adequate advance notice to allow DEP staff to be present" during "critical drilling phases." Advance notice of commencing the HDD is quite different than advance notice of commencing a critical drilling phase. DEP staff cannot be expected to be onsite during the 95 to 120 days Sunoco expects to be conducting this HDD. The Department's request for more specific notification regarding critical drilling phases is reasonable and the Department should require Sunoco provide such notice for this site.

Point 13 (casing)

The Department wrote, "Based on the occurrence of at least four (4) recent IRs in nearby HDDs, the use of casing in the pilot hole at the entry and exit points should be mandated by Sunoco." Sunoco has simply disregarded this instruction. The use of casing is perhaps the best measure to mitigate the risk of IRs during entry and exit. Sunoco has provided no explanation for why casing would be inappropriate here. The Department should require Sunoco to comply.

Point 14 (Terracon Report)

As a report which is an integral part of the report is not yet in final form, the Department does not yet have the full set of information on which to base a decision to approve the start of this HDD. The Department should review the Terracon Report in final form when it is available before making a decision.

Point 15 (soil testing)

Sunoco claims that "Laboratory test results for soils above bedrock do not affect the design of an HDD." If that is Sunoco's practice, that is a problem, because soil structure can affect the likelihood of IRs where the pipe is above bedrock or in fractured bedrock. The Department should not allow Sunoco to disregard tests it commissioned.

Point 17 (geophysical testing)

Sunoco claims that surface geophysics will not be useful in determining bedrock depth, soft soils, or fractures because at five karst locations, usable data was provided to a depth of 15 feet to 60 feet below ground surface, and that the "averaged horizontal depth" of the HDD profiles is deeper.

Sunoco is cherry-picking. It is unclear what geophysics Sunoco has performed *outside* the five Mariner East 2 karst locations, or what methodology it has used at those five sites. Sunoco has made no claim (and cannot) that geophysics is useless below 60 feet underground. Sunoco Pipeline has installed a lot more pipe than just for Mariner East 2 and has done a lot more geophysics than just at five sites.

Depending on the methodology you use, it can provide effective information much deeper than 60 feet below ground surface. For example, at the following link, Spectrum Geophysics describes a study it conducted to determine depth to bedrock including as deep as 130 feet below ground surface. https://spectrum-geophysics.com/bedrock.html.

Sunoco's response appears intended to deceive the Department; it is a weak attempt, the Department request is on point.

Point 24 (plan for groundwater handling)

Sunoco's response to Point 24 is inadequate. Sunoco may not predict the rate of groundwater production in advance, but it can certainly state its plan for handling groundwater if the rate is high, low, or medium. Sunoco has not even made an effort to do so here.

Point 25 (bentonite plug length)

Sunoco's response to Point 25—"SPLP appreciates the Departments [sic] recommendation"—is emblematic of its attitude throughout the development of Mariner East 2. DEP cannot let Sunoco continue to flout the Department's regulatory authority and make a mockery of the law.

Points 28, 29, and 30 (water supply contamination response plan)

Sunoco writes:

both the Inadvertent Return Assessment, Preparedness, Prevention and Contingency Plan ('IR Plan') and the Operations Plan require SPLP to offer alternative water supplies to landowners with water supply wells within 450 ft of the drill profile. Obviously, to the extent a landowner accepts this offer, their water supply should not be adversely affected during HDD activities.

This is not obvious—in fact, it is not at all the case. Water well contamination and impairment is not a temporary matter that always resolves, leaving the supply owners free to start using

their water supply good as new. The Department should reject the false presumption that offering a temporary water supply is a solution to property damage to third parties.

It should be stressed that Sunoco took most of the land for its pipeline from landowners under the threat of condemnation using eminent domain, or the actual use of eminent domain. These are third parties many of whom do not want this company tearing up their land to build these pipelines. The inability to use their own water supplies due to a Texas company's forceful entry onto their property is an extreme circumstance. When Sunoco writes, "The best means to protect water well quality or quantity during the HDD is non-use," Sunoco is attempting to normalize the theft of a third-party's property rights—their ability to use their water supplies—for the purposes of Sunoco's profits.

The best means to protect a water supply is to not violate the rights of the third parties in the first instance.

Sunoco states that two landowners have agreed to accept temporary water supply during the HDD process. Sunoco should provide proof of the agreements entered with landowners regarding temporary water supplies. Until this process is complete and the requested documentation has been provided to the Department, this plan should not be approved.

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

Sincerely,

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