May 28, 2019





By Email

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Re: Sunoco's response to the Department's request for information on HDD PA-BL-0001.0031-RD-16 (HDD# S2-0109-16)

Dear Mr. Williamson,

On March 28, 2019, the Department requested additional information from Sunoco regarding its reevaluation ("Report") of the horizontal directional drilling ("HDD") indicated by drawing number PA-BL-0001.0031-RD-16 (the "HDD Site"). Sunoco responded to the March 28, 2019 letter on May 22, 2019, supplementing the Report. 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 regarding Sunoco's May 22, 2019 supplemental response ("May Response"). The comments are numbered to correspond to the numbering in the Department's March 28, 2019 requests and the May Response.

1. Justification of Drilling Path

The Department made a number of requests related to Sunoco's lack of explanation or justification for the specifications it is proposing for the 16-inch profile. First, the Department pointed out that Sunoco "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." In the Report, Sunoco had claimed that because it had the full geologic profile from the drilling of the 20-inch HDD, it did need to collect additional geotechnical information. This makes it especially important that Sunoco provide the full geological profile from the 20-inch HDD and discuss how that data informed its plans for the 16-inch line.

Despite the Department specifically calling this out, Sunoco has still failed to provide any of the specific data it gathered during the drilling of the 20-inch line, including the full geologic profile, and it has still not discussed in any meaningful data how specific data was used. In its May Response, Sunoco argues that it provided "cross section views" of IR events. While those data points were a helpful addition, it is not the same as or a substitute for the full geologic profile for the 20-inch drill. Sunoco needs to explain and provide the data to support what specific geological conditions it encountered along the entire path of the 20-inch drill.

Sunoco's May Response does improve somewhat on its explanation of why the proposed bore path for the 16-inch line was chosen, but it still lacks sufficient detail. A satisfactory response would discuss factors such as the integrity of the bedrock at the specific depth that was chosen for the horizontal run as compared to the integrity of the bedrock at other potential depths and tie that discussion to quantitative measures. No such discussion is provided.

2. Analysis of Geological Depth and Profile Strength

The Department has rightly pointed out that the Report provides no analysis "tying the revised drill path to any specific zones noted in the core boring logs or why the revised 16-inch path was chosen." The May Response fares no better. Continuing its pattern of evading discussion supported by specific facts and data, Sunoco again provides only general statements about having chosen the path for the 16-inch bore based on information from drilling for the 20-inch line. It still does not provide the actual logs, reports, or investigations that it asserts it relied on, or explain the specifics of what those sources show. If Sunoco's proposal is sound, it should be not be difficult to provide an analysis "tying" its conclusions to the specific data that supports them. The Department and the public cannot be expected to trust empty claims.

3. Overburden Strength

Sunoco asserts it has provided sufficient information regarding overburden strength. The information it refers to though (water content, Attenberg Limits, etc.) were in Sunoco's first submission. The Department deemed that information to be insufficient and asked for additional information. Sunoco has still not responded to that request.

Sunoco writes, perhaps in explanation, that "The Order is not clear when defining overburden strength, which is not a common geotechnical engineering term." Nonetheless, it is the term Sunoco agreed to when stipulating to the Order. If Sunoco sees ambiguity in the terminology two years later, the solution cannot be to ignore the language of the Order. Sunoco must comply with the intent as expressed through the language Sunoco agreed to, which clearly is as the Department identified: the strength of the overburden as a structure.

4. Direct Pipe

Sunoco must show data supporting its conclusion that the impacts from using a Direct Pipe exceed the impacts from an open cut construction plan. Sunoco asserts that it has abandoned the possibility of using a Direct Pipe method because its impacts would exceed those for open cut but provides none of the information used to make that determination. They simply make the conclusory statement that when combined "layout of the workspace for the Direct Pipe Bore entry, exits, and means of access to these locations, the impacts to streams, wetlands, and clearing of forested lands exceeded the impacts of a straight conventional open cut construction plan; therefore, these plans were abandoned." Potential impacts of the Direct Pipe option should be presented and discussed both quantitatively and qualitatively so the Department and the public are able to verify Sunoco's decision prevents impacts to the fullest extent.

5. Re-route analysis

Sunoco provides insufficient information as to why co-location with the parallel utility line could not be considered. In their request, the Department states "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 'rightof-way'." Sunoco merely responds that using the existing right-of-way was rejected because it would "result in the same landowners and Waters of the Commonwealth being crossed." However, there was no discussion and probably no consideration, of how using the existing right of way may have minimized impacts to wetlands, other ecological habitats, soil stability, etc. The only other information that Sunoco provides is that "SPLP could not encroach within the utility cleared and maintained corridor." Consistent with the Department's request, Sunoco should supply additional detail on this point. Throughout the permit application and reevaluation process, Sunoco has consistently relied on co-location or lack of co-location with other utilities as means for justifying its route selection. If there are particular circumstances that make this utility easement inaccessible to Sunoco, it should disclose them. As it stands, it appears Sunoco is presenting a generalized concern that it is not possible to co-locate with another utility and this casts doubt on many of its route selection justifications to date.

6. Geologic and Hydrogeologic Report

Upon the Department's request, Sunoco has substituted two portions of its Geologic and Hydrogeologic Report that apparently had been included by mistake in the Report and likely corresponded to a different drill site. Sunoco has not explained how (or if) these mistakes change its analysis. It should be required to do so.

7. Analysis of Well Production Zones

Sunoco failed to present a coherent response to the Department's request for information regarding water supplies. Per the Department's request, Sunoco did include some additional information regarding water supply surveys. However, the information paints an unclear and very concerning picture. It also is not the analysis the Department requested.

Sunoco says that "in accordance with the Order [issued August 2017] SPLP conducted a survey in an effort to locate and water supply wells within 450 feet." They go on to say that five water wells were identified as a result of their August activity and that none of these five had been previously identified by the PaGWIS search.¹

a. 1800 Newry Lane Water Supply

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¹ The report states: "In accordance with the Order, SPLP conducted a survey in an effort to locate any water supply wells within 450 feet of the Old U.S. 220 HDD profile. A total of five water wells (none of which were identified within the 0.5-mile radius search of the Pennsylvania Groundwater Information System) were identified and are represented on Attachment 3 of the Hydrogeologic Re-Evaluation Report."

Sunoco then says that from one of these water supplies they took four different water samples at one of these five water supplies "during various stages of completion of the 20-inch HDD." The analytical results for that water supply show that samples were taken on the dates of:

- 11/01/2016
- 06/06/2017
- 10/25/2017
- 06/12/2018

This presents quite a mystery. As previously mentioned, Sunoco claims to have conducted a survey to identify water wells in August of 2017. It says that survey resulted in the identification of five wells which, they also say, were not previously identified by PaGWIS. This raises the question: how then, was Sunoco able to collect samples on November 1, 2016 and June 6, 2017, of a well which it discovered in August of 2017? This raises the concern that Sunoco is unfamiliar with its own well data and testing timelines, or, at the very least, has not shared all pertinent information with those conducting the re-evaluations. Sunoco must explain this discrepancy.

b. Amerigas Propane Water Supply

After Sunoco mentions that four samples were taken from the water supply at 1800 Newry Lane, they go on to say that "A second location (WL05162017-475-01[also identified as the Amiergas Propane Water Well]) was only sampled prior to the initiation of construction activities because the water supply well ran dry while it was being purged during HDD operations and no other attempts were made to sample this location." The Department must require further explanation of this statement before allowing further activity at this site.

The statement is problematic on multiple levels. First, Sunoco states throughout its report that construction of the 20-inch HDD line started on June 22, 2017. The date of testing for the Amerigas well is 5/16/2017. This means that, like with the 1800 Newry Lane well, Sunoco had, in fact, identified the water supply – and *tested* it – before the date that they claim discovered its existence. It is enormously troubling that Sunoco has apparently possessed water supply information for quite some time and not only kept it from the Department at the time of construction but also failed to include it in their initial reevaluation report, submitted on February 12, 2019.

Furthermore, because Sunoco reports that Amerigas' water was tested because of impacts from HDD activity, it signifies that Sunoco had presumably received some kind of contact from Amerigas, conveying this information. Yet Sunoco attests, in both their February and May reports that "No complaints from adjacent water well owners were received during installation of the 20-inch pipeline."

Finally, Sunoco's casual mention of the well being "purged" and running dry during HDD construction demands explanation. A well running dry and being purged seems to further belie Sunoco's claims of there not being problems with water supply wells associated with is construction at this site. If nothing else, significant problems might have been anticipated and

the well purged preemptively. For a well to be eliminated presents a serious concern and the Department should continue pressing for answers.

c. Water Quality analysis shows contamination

Sunoco concluded that for *all* of the water quality tests, "none of the parameters typically identified in samples impacted by drilling fluids (i.e., turbidity, total suspended solids, iron and manganese) were identified in these samples at concentrations exceeding the Department's established primary and secondary drinking water standards (MCLs/SMCLs)."

However, the test results Sunoco included say quite the opposite. Four of the five water supplies tested show Manganese and Iron at levels exceeding – sometimes enormously - the safe water drinking standards. The level of iron found in the Lanzendorfer Well #1 was 1,583 times higher than the safe drinking water standard.

GES Well ID	Mangane se	PADEP drinking water MCL/SM CL
WL-05162017-475-01 (Amerigas Propane)	.0126	.05
WL-09272017-614-02 Lanzendorfer Well #1	.075	.05
WL-09072017-614-02 Bugley Water	.150	.05
WL-09272017-614-01 Lanzendorfer Well #2	ND	.05
WL-11012016-499-01 1800 Newry Lane	.237 (highest)	.05

GES Well ID	Iron	PADEP drinking water MCL/SM CL
WL-05162017-475-01	3.58	0.3
Amerigas Propane		
WL-09272017-614-02	47.5	0.3
Lanzendorfer Well #1		
WL-09072017-614-02 Bugley Water	7.83	0.3

WL-09272017-614-01 Lanzendorfer Well #2	ND	0.3
WL-11012016-499-01 1800 Newry Lane	1.90 (highest)	0.3

It may certainly be that the high iron content in these wells has nothing to do with Sunoco's construction, however, Sunoco should make that point explicitly if it is the case.

Sunoco must also be made to conduct more recent samples at each water supply before they are allowed to drill the 16' line.

8. Pipe Stress Allowance

Sunoco's response suggests it did not read, or perhaps did not understand, the Department's request. The Department instructed Sunoco to: "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.'" (Emphasis added.) Sunoco's overview on pipeline stress allowance is not an explanation as to how the design of *this* HDD accounts for pipe stress allowance. The Department, reasonably, requested an explanation that would tie together what Sunoco generally refers to as an "integral part of design of calculations" with the actual design for this Site. Sunoco has still failed to provide this site-specific explanation.

Thank you for considering these comments. Please keep Appellants apprised of any next steps.

Sincerely,

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