

March 6, 2020



By Email

ra-eppipelines@pa.gov  
kyordy@pa.gov



**Re: Sunoco’s response to the Department’s request for information on PA-LE-0055.0000-RD-16 (HDD# S3-0101-16)**

Dear Mr. Williamson,

On December 12, 2019, the Department requested additional information from Sunoco regarding its reevaluation (“Report”) of the horizontal directional drilling (“HDD”) indicated by drawing number PA-LE-0055.0000-RD-16 (the “HDD Site”). Sunoco responded to the December 12, 2019 email on February 28, 2020, revising 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 February 28, 2020 supplemental response (“February Response”). The comments are in sections with numbers corresponding to the items in the Department’s December request and in the February Response.

**1. Sunoco fails to answer the Department’s questions on monitoring data and the location of the 16-inch profile, and further analysis reveals the depth of the 16-inch profile is only supported by cherry-picking the data.**

Paragraph 5 of the Order reads in part:

Upon completion of Sunoco's re-evaluation of each HDD site referenced in Paragraphs 2 and 3 herein, Sunoco shall provide for each such site a report signed and sealed by a Professional Geologist, describing and presenting the results of its study for that location ("Report"). The Professional Geologist shall be a person trained and experienced in geotechnical and hydrogeologic investigation.

The Department requested that Sunoco comply with the Order, writing: “What ‘monitoring data collected during active drilling’ was used? Please present all of the data, including the ‘monitoring data collected during active drilling’ of the 20-inch HDD, and explain how the location of the revised 16-inch HDD profile was determined.”

Sunoco does not present all of the data, as requested. Rather, it alludes to broad categories of data that it claims to have taken into account and then jumps to its conclusion. This does not allow the Department or the public to evaluate the information and is inconsistent with the Order’s requirement to “describ[e] and present[] the results of [Sunoco’s] study for that location.” Nor does Sunoco anywhere “explain how the location of the revised 16-inch HDD profile was determined.” Sunoco does present data which at first glance seems to support its deepening of the profile to the 90-115 feet bgs range:

From 90 feet bgs to 115 bgs, RQD values ranged from 68 to 99, and recoveries were 100. The RQD values for the 5-foot sample interval above and below the proposed profile depth were 68 and 61, respectively. These RQD values are indicative of competent bedrock overlying the HDD profile for the horizontal run for 412 feet before and 341 feet after the geographic location of the IR events during the 20-inch HDD.

When actually looking at the newest boring report it attaches, however, the data do not support the depth chosen as the clear best depth. Appellants present in the table below data extracted from the boring report showing RQD values for each five-foot interval below ground surface, for the latest bore and the closest earlier bore, located about 150’-200’ away and still intersecting the horizontal run of the proposed 16-inch (note that the samples for the earlier bore are not precisely every five feet, so the numbers below are for the closest data to the given five-foot interval):

Feet bgs	RQD S3-0101	RQD B-2	Feet bgs	RQD S3-0101	RQD B-2	Feet bgs	RQD S3-01-01	RQD B-2
5-10	0	none	50-55	73	75	95-100	99	52
10-15	81	31-68	55-60	68	95	100-105	98	67
15-20	83	77	60-65	53	100	105-110	91	none
20-25	83	75	65-70	53	95	110-115	88	none
25-30	88	87	70-75	18	75	115-120	68	none
30-35	71	80	75-80	58	100	120-125	61	none
35-40	100	68	80-85	56	62	125-130	62	none
40-45	28	55	85-90	47	35	130-135	73	none
45-50	65	92	90-95	88	70	135-140	32	none

The profile view reveals that “the horizontal run for 412 feet before and 341 feet after the geographic location of the IR events during the 20-inch HDD” that Sunoco discusses falls into

the height above mean sea level corresponding with the 115-120-foot bgs stratum of the S3-0101 and B-2 bores. Sunoco writes that “[t]hese RQD values are indicative of competent bedrock overlying the HDD profile for the horizontal run” in that location. Overlying the 115-120 foot stratum are indeed rock layers that have high RQDs according to the S3-0101 bore, ranging from 88-99 in the 90-115 feet bgs range.

But two complications emerge, looking at the data. The first is that the rock layer where drilling would occur has a much lower RQD according to the S3-0101 bore data, at 68, and even lower just below that layer. The second is that the nearby B-2 bore shows that the RQD varies widely within the span of the horizontal run. The 90-105 feet bgs range according to the B-2 bore has a much lower RQD of 52-70. This is not promising for the proposed 16-inch revised profile. Applying Sunoco’s criteria but using the B-2 rather than S3-0101 data, a better depth might be in the 70-75 feet bgs range. Starting at about 35 feet bgs, the RQD data for the two bores diverge strongly and only correlate weakly. This is not a reliable data set on which to plan the 16-inch profile.

It is under precisely circumstances such as these that geophysical data are most important.

**3.b. Sunoco continues to fail to justify its baseless statement that there are no interconnected fractures underlying Snitz Creek.**

The Department correctly calls Sunoco out for failing to explain or justify its baseless conclusion that there is a “lack of interconnected fractures” underlying Snitz Creek. In its February Response, Sunoco claims that data from the 20-inch drill shows that the fractures are not interconnected. Such data, no matter what it is, *cannot* justify that conclusion. The rock underlying Snitz Creek is three-dimensional. Just because the linear 20-inch path reportedly did not intersect interconnected fractures multiple times does not mean that the separate revised 16-inch path would not do so, let alone that such interconnected fractures don’t exist. Indeed, the Hydrogeologic Reevaluation Report in the initial Report explained at Section 9.0 that the geology at the Site exhibits “a complex karst fracture system.”

As a result, Sunoco’s conclusion that “given the greater depth of the revised profile through more competent bedrock, additional IRs will likely not be encountered during completion of the 16-inch HDD” is unscientific.

**4. Sunoco should still conduct geophysical surveys in the area surrounding Snitz Creek.**

Sunoco contends that it could not conduct geophysical surveys in the area surrounding Snitz Creek “because portions of the drill path were too saturated or overgrown to allow for accurate geophysical measurements.” Appellants question this conclusion. Recent research has shown that even in wetlands and environmentally sensitive areas, using multiple geophysical surveying methods and correlating the data will result in accurate survey results. *See* Groves et al., “Use of geophysical methods for soil profile evaluation,” *Canadian Geotechnical Journal*, Sept. 2011, available at

[https://www.researchgate.net/publication/237373374\\_Use\\_of\\_geophysical\\_methods\\_for\\_soil\\_profile\\_evaluation](https://www.researchgate.net/publication/237373374_Use_of_geophysical_methods_for_soil_profile_evaluation). The Department should require Sunoco to explain in technical detail why

others have been able to obtain accurate geophysical survey results in the same type of environment where Sunoco says it cannot.

**5. Drilling the 20-inch likely contaminated neighboring wells, and the 16-inch as revised is likely to do so as well.**

Sunoco concludes that the third (previously undisclosed) well water contamination incident is unrelated to its drilling--the same conclusion it came to for the first two. The Department concluded that Sunoco did not have enough data to reach that conclusion. The reporting of water quality complaints in three domestic water supply wells of the 26 within a half mile of the alignment, all during the first half of 2018, is significant and unlikely to be just a matter of chance, as Sunoco suggests. The Department knows that sometimes Sunoco's use of HDD has caused water supply contamination. The presumption should be that such contamination nearby a during Sunoco's use of HDD was Sunoco's fault, unless a more likely explanation is shown. No other explanation has been shown for these three well water contamination incidents.

This should also be looked at in light of Sunoco's history of disclosure of these complaints. In its Report as initially issued, Sunoco wrote that "No water supply well complaints were received during drilling of the 20-inch pipeline." This was false. Next, Sunoco disclosed two of the three of which the Department is aware on August 29, 2019. Now, in its February Response, Sunoco finally discloses the third. Why does Sunoco repeatedly hide the ball regarding the water contamination complaints?

Given that Sunoco has failed to scientifically determine the location of underground fractures and the competency of the bedrock where it plans to drill the 16-inch pipe, its statement that impacts to water wells from the 16-inch would be "unlikely" are hopeful but unscientific speculation. This is not sufficient protection for the neighbors who have already been put through too much.

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

Sincerely,

s/ Melissa Marshall, Esq.  
Melissa Marshall, Esq.  
PA ID No. 323241  
Mountain Watershed Association  
P.O. Box 408  
1414-B Indian Creek Valley Road  
Melcroft, PA 15462  
Tel: 724.455.4200  
mwa@mtwatershed.com

s/ Joseph Otis Minott, Esq.  
Joseph Otis Minott, Esq.  
Executive Director & Chief Counsel  
PA ID No. 36463  
joe\_minott@cleanair.org  
  
Alexander G. Bomstein, Esq.  
PA ID No. 206983  
abomstein@cleanair.org

s/ Maya K. van Rossum  
Maya K. van Rossum  
The Delaware Riverkeeper  
Delaware Riverkeeper Network  
925 Canal St., 7th Floor, Suite 3701  
Bristol, PA 19007  
Tel: 215.369.1188  
keepermaya@delawareriverkeeper.org

Kathryn L. Urbanowicz, Esq.  
PA ID No. 310618  
kurbanowicz@cleanair.org

Clean Air Council  
135 South 19th Street, Suite 300  
Philadelphia, PA 19103  
Tel: (215) 567-4004

cc: jrinde@mankogold.com  
dsilva@mankogold.com  
ntaber@pa.gov