

DEP Permit # E65-973
DEP Permit HDD Reference # PA-WM2-0064.0000
DEP HDD # S2-0010
Township – Loyalhanna
County - Westmoreland
HDD Site Name – Loyalhanna Lake Crossing

3rd Public Comment Period

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1. Comment

On April 11, 2019, Sunoco submitted a letter to the Department in response to the Department’s requests at a March 28, 2019 meeting for additional information and analysis relating to horizontal directional drilling (“HDD”) Site PA-WM2-0064.0000-WX-16 (“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. These comments address Sunoco’s response to the requests for evaluation of alternative routes and crossing methods.

1. Alternative Route Selection Generally

At a high level, Sunoco’s selection of alternative routes to consider appears reasonable. Viewed closer in, some of the choices appear unreasonable or the reasonability depends on information that is not made available in Sunoco’s letter.

Appellants discuss this as applied to each alternative below.

Also, the avoidance of trenchless crossing is sensible in certain instances if the same conditions that made trenchless crossing harmful when it was done at the default route would also apply at the alternative routes. That is unclear here. Sunoco's IR causation analysis in its initial re-evaluation report attributed problems in the Glenshaw Formation generally to "shallow overburden, coarse grained unconsolidated materials near the surface (such as alluvium and mine spoil), large elevation changes between entry/exits and the lowest elevation points along the profiles (sometimes creating soil plugs, elevated annular pressures, and loss of fluids), and the interconnectivity of open bedrock structural features that is difficult to predict." At the Loyalhanna Lake crossing, Sunoco added that "cuttings were not being efficiently removed from the borehole due to the vertical movement of the return fluids and effect of gravity on the cuttings, causing the borehole to plug from cuttings build up within the borehole annulus below the location of the relief well." Also, Sunoco wrote that "The occurrence of the IR events during the installation of the 20-inch diameter pipeline under Loyalhanna Lake resulted from the proximity of the entry point to a falling away slope that paralleled the land surface, and resulting shallow depth of cover on the HDD entry radius, while proceeding through fractured sandstone bedrock in the upper 50 ft of the profile."

It is not clear whether similar conditions (or other risky conditions) exist at the other alternative crossings. Therefore, the relative harms from open trenching and HDD cannot be compared. Open trenching across a broad span of a lake, though possible, would likely do great harm to the lake and cause an enormous amount of sediment disturbance. Unless the risk from HDD is high, avoidance of the lake or use of trenchless crossing is generally preferred.

2. Alternative Crossing 1

Though this alternative crossing is sensible at a high level, there are several choices that could be made to reduce its harm and risk from this re-route.

First, based on the map at the end of Sunoco's letter, the route barrels down a steep wooded slope directly into the Lake. Sunoco notes that the grade of that slope is 56%, and it would need to clear a 125-foot corridor and install "permanent geo-engineered restoration to permanently stabilize the slope post construction." This option is unacceptable. In reality, there is no such thing as permanent geo-engineered restoration. At some point in time, Sunoco will be no more, and geo-engineering degrades over time. This proposal essentially means that the slope will at some point erode or collapse into the Lake.

Fortunately, there are alternatives. The slope is gentler a few hundred feet farther south. Sunoco should evaluate an alternative there instead.

That alternative has a further benefit of reducing the amount of forested wetland crossed. Notably, the map indicates the route falls just within the bounds of lakeside wetlands on the eastern shore. This is probably why Sunoco quantifies 1.3 acres of forested wetlands crossed, plus 2.19 more acres for crossing-related space. Moving the route slightly to the south would avoid most of these sensitive resources.

3. Alternative Crossing 2

The second alternative suffers from the same fault as the first in choosing to cross at a location with a very steep slope—68% in this instance. This appears to be one of the steepest slopes alongside the Lake. If Sunoco chose to land on the eastern side of the Lake at a location a few hundred feet west, the slope would be much gentler.

Strangely, after rightfully quantifying land use impacts for the first alternative, Sunoco fails to do so for the second. This makes it difficult to do an apples-to-apples comparison among the alternatives.

4. Alternative Crossing 3

The third alternative appears to be preferable in terms of slope grade than the first two. Based on the map and on satellite imagery, it appears a much greater amount of forested greenfield construction would be required, though Sunoco neither notes this nor quantifies it. Sunoco remarks that “Due to the number and density of residential home sites, it is unlikely that an easement for the entire reroute could be obtained without the use of condemnation.” It is unclear how Sunoco reaches this conclusion. The route appears to parallel Forest Drive on the east side of the Lake, which appears to be the only location on the route with housing to speak of. But it is south of the home development spurring off of Woodland Drive, and only has a handful of houses. No housing density to speak of.

5. Alternative Crossing 4

The fourth alternative actually does have relatively dense housing to the east of the Lake, but takes good advantage of an existing cleared powerline right of way and road on the east side of the Lake and crossing the Lake itself, thereby avoiding the need for excessive clearing in those stretches. However, the route north to that crossing point is long and appears to be in large part greenfield. As with all but the first alternative crossing, Sunoco has avoided quantifying land use impacts here.

6. Alternative Crossing 5

Going as far north as the fifth alternative has the benefit of avoiding trenching the Lake— assuming trenchless crossings at those locations were off the table, which

should not be the case without analysis of the risks and benefits. The main drawback is the long increased greenfield corridor. Sunoco notes that “a portion of the valley on the east side has a slope of 85%.” It would seem that Sunoco would be able to avoid this slope, and this alternative should include a minor adjustment to do so.

7. Alternative Crossing Methods

As noted above, in most circumstances, crossing a lake using some variant of open trenching will produce major environmental impacts. These can take the form of turbidity, harm to benthic species, etc. Sunoco’s description of direct bore construction is helpful, but fails to provide a comparison to the impacts entailed by HDD. Sunoco also does not provides analysis of how direct bore would serve or not serve to reduce the risk of the specific problems that Sunoco already caused at the Loyalhanna Lake crossing. This information is the key to the alternatives analysis.

Thank you for considering these comments. Please keep us apprised of your next steps on the HDD Site. (1-5)

Letter – [Clean Air Council – 4-17-19 – Loyalhanna Lake Crossing](#)