



CATANIA ENGINEERING ASSOCIATES, INC.

Consulting Engineers & Land Surveyors

May 25, 2018
File No. 84200-261

Mr. Frank DeFrancesco, Chief
Dams and Waterway Section
Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, PA 19401
Via US Mail and Email: fdefrances@pa.gov

Re: Sunoco Pipeline, L.P. (SPLP)
Pennsylvania Pipeline Project
Supplemental Horizontal Directional Drill Analysis
Arch Bishop/South Chester Road Crossing
PA DEP Section 105, Permit No: E15-862 & E23-524
PA-CH-0421.0000-RD & PA-CH-0421.0000-RD-16 (SPLP HDD No. S3-0541)
Thornbury Township, Delaware County
SPLP Response (May 22, 2018) to PA DEP Comments Letter (February 22, 2108) on Hydrogeological Reevaluation Report

Dear Mr. DeFrancesco:

On behalf of the Thornbury Township Supervisors and other officials of Thornbury Township, we are writing as the Township Engineer to give official public comment and responses to the above referenced letters from SPLP and PA DEP as follows:

1. We would like to note that the above referenced SPLP response letter only references Westtown and Edgmont Townships in their heading.
 - a. Request – Considering one of the proposed South Chester Road HDD drill sites is located entirely within Thornbury Township, along with the entire pullback section being located in Thornbury Township, we would ask that SPLP update its report and responses to address the concerns of Thornbury Township and its residents.
2. Comment #2 - We have concerns that wells outside of SPLP's stated 450 foot notification area could be contaminated. It is unclear as to how the 450 foot impact area was determined.
 - a. Request - Please provide justification sealed by a Pennsylvania Licensed Professional Geologist that wells outside of the 450' profile will not be impacted.

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3. Comment #3 – Based upon our comment #1 above, it is unclear as to whether SPLP's response letter is accurate with respect to the number of notices sent out to well users and whether Thornbury Township residents were included in such. That being said, the SPLP response only offers a short term, temporary water supply and does not offer to provide a long term water supply solution.
 - a. Request – We have serious concerns over the long term effects of the HDD operation on the local water supply and would request that SPLP take all actions necessary to avoid impacts to all water supplies. We would also request that SPLP offer a long term water supply solution to any affected property owners as requested in the PA DEP letter of February 22, 2018.
4. Comment #8 – We believe the SPLP response to PA DEP is inaccurate, as multiple failed HDD attempts were observed at an HDD site only 1 property away from the South Chester Road HDD site which also crossed Slitting Mill Road. Difficulties in steering of the drilling tool were apparent throughout the process. Even with the observed use of SPLP's Tru-Track system, SPLP often lost track of exactly where the drill tool was. As a result, we have serious concerns that the proposed intercept drill concept for the South Chester Road HDD will not be accomplished and create greater environmental threats in the process. We have detailed the witnessed HDD failures below for your reference:

The referenced failed drill site, exiting by Slitting Mill Road and starting only 1 property away from the South Chester Road HDD site, involved 1,350 ft of failed drilling from October 2, 2017 to October 19, 2017, where proper steering through a section of rock was found to be impossible. Failed Intercept drilling was also performed at this location between October 19, 2017 and November 7, 2017 (almost 3 weeks), upon which the failed intercept drilling was abandoned and an entirely new HDD location was begun. Most of the intercept drilling involved missing the intercept hole location and re-drilling new holes until finally giving up on the concept. From November 7, 2017 until November 20, 2017 the new HDD pilot hole was completed, however, the drill came out 10 feet away from the targeted exit point. This should not be a surprise, as the submitted Supplemental HDD Analysis report states on pages 3, 21, & 22 that "...steering within the Baltimore Gneiss has been problematic... These minerals and rocks can divert the drill bit from the intended alignment." With the proposed South Chester Road HDD being 6,346 feet in length, and almost 5 times the length of the failed intercept drilling referenced above, we do not have much confidence that an intercept drilling concept will work within the proposed South Chester Road Area.

We also have concerns that Inadvertent Returns (IR) are more likely to occur in a failing intercept drill scenario, where drills will likely need to be realigned and create additional holes to try to line up the intercept as seen at the above referenced Slitting Mill Road HDD site. With the Slitting Mill Road site, 6 IR's occurred in a 1350 ft HDD, whereas many more would be expected with a 6,346 ft HDD within similar geology.

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- a. Request – A single drilling location at West Chester Pike, SR 3, with exit point near SR 926 is requested. This would help to reduce construction noise in an adjacent Thornbury residential development and is the more likely scenario to actually be accomplished in the field.
 - b. Request – The handling of abandoned drill holes should be addressed in writing, as we have concerns about leaving failed drill hole sites open and creating unnatural pathways for groundwater, drilling contaminants, or promoting further inadvertent returns. Special consideration should also be taken with the drilling fluid mixture to minimize such impacts.
5. Comments #12 & 13 – We have serious concerns that the use of loss control materials and grouting has been conditioned to only be used by SPLP upon loss of pressure, potential contamination, and IR events.
- a. Request – We would request the use of preventative measures rather than reactionary measures to prevent contamination and IR events wherever possible and as recommended and approved by PA DEP.
6. Comment #14a – We have serious concerns that the SR 926 Drill Site Location near SR 926 has been moved further south along the SR 352 corridor and is located within very close proximity of the existing and active SPLP pipelines. The listed utility conflicts also do not take into account the underground electric lines associated with traffic signals at the intersection of SR 926 and SR 352, where the HDD will be at its most shallow point.
- a. Request – Please provide justification sealed by a Pennsylvania Licensed Professional Engineer that the drilling operation, soil disturbance and related vibrations will not adversely affect the existing SPLP pipeline.
 - b. Request – Revised Erosion Control Plans should be submitted, documenting the proposed changes to the SR 926 HDD drilling location, along with any required changes in the required wash rack location.
 - c. Request – A detailed analysis of utility conflicts at the entry and exit points should be performed by SPLP to ensure proper design clearances can be achieved.

In addition to the concerns raised with respect to the Hydrogeological Reevaluation Report as noted above, Thornbury Township would also like to note some additional concerns as follows:

7. Noise Level Consideration – The drill location near SR 926 will involve noise from not only the drill and construction equipment during work hours, but also from generators and heaters used outside of Township permitted work hours to keep drilling equipment and fluids from freezing overnight. The overnight noise from the generators and heaters has already generated a complaint, which Sunoco addressed by adding more

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sound barriers/sound curtains in the area of the Slitting Mill Road drill rig site. The referenced Slitting Mill Road HDD is located much further away from residential homes than the SR 926 site, which may have drilling equipment as close as 50 feet to a residential structure.

- a. Request – If the SR 926 intercept drill site location is not abandoned as requested above, Sunoco should address how they will be able to provide a more quiet method of powering and heating the drilling equipment and fluids overnight and throughout the construction process. Temporary power and a meter from PECO should be investigated as an alternative quiet source of power for such (PECO power lines are adjacent to the SR 926 drill site). Heaters with better sound proofing and/or additional sound barriers should also be investigated.
8. Dust Control - It should be noted that contaminated soils were previously found at the South Chester Road HDD drill site and pullback area, which requires enhanced dust control measures as noted in current PA DEP permitting. While Sunoco has attempted to provide limited dust control, they have struggled with the effectiveness of their current methods.
 - a. Request – Additional and enhanced dust control measures should be addressed by Sunoco prior to any future work occurring at the South Chester Road HDD drill site and pullback area.
9. Wind Damage of Sound Curtain/Wall System - The current sound curtain and sound wall system installed at the Sunoco work site in Thornbury Township has been found to be deficient with respect to being able to withstand required wind loadings. Wind damage resulting in the complete loss of sound attenuation was observed on the following dates: 4/4/18, 3/5/18, 1/9/18, 12/27/17, and 11/19/17 with the sound curtain original installation completed on, or about, 10/4/17. The Township notes that prior to the sound curtains complete failure, the curtains have often been observed to exist in a state of disrepair by showing separation between blankets, tears and holes in the blankets, and blankets blowing in the wind. The consistent wind damage to the current sound curtain and sound wall system has shown that it is not only inadequate, but it has also become a safety hazard to adjacent Thornbury residents with the associated flying debris.
 - a. Request - Sunoco shall submit an alternate sound wall/curtain system design that will be a more stable, secure and substantial system. The alternate sound wall/curtain design system design must meet or exceed the Pennsylvania Uniform Construction Code, latest version for wind and seismic loading requirements for structures of their respective shape and size. This design shall be prepared, signed, and sealed by a Pennsylvania licensed professional engineer of Sunoco's choosing. It should be noted that a complete redesign of the existing system may be necessary to meet these requirements.

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- b. Request – While Sunoco works on a new permanent sound wall/curtain system design, temporary privacy screening should be installed to address the removal of vegetation and portions of the landscape buffer berm. No work should commence in this area until a new permanent sound wall/curtain system design is submitted, approved and installed.

While the above noted items are areas of heightened concern for Thornbury Township, we have concerns with all of the items noted within the PA DEP letter of February 22, 2018. Based upon our review, it would appear that the SPLP's May 22, 2018 response letter does not address many of the concerns raised in the referenced PA DEP letter, nor none of Thornbury Township's concerns as listed above. We would ask that PA DEP require further investigation, studies and proper responses to the concerns raised by all interested parties.

Thank you for the opportunity to comment on this project and we look forward to working with you in the future. Should you have any further comments or questions, please feel free to contact me.

Very Truly Yours,



Michael J. Ciocco, P.E.
For Catania Engineering Assoc., Inc.
Township Engineer

Cc: Sunoco Pipeline L.P.
Thornbury Township
James Byrne, Esq.