



Groundwater & Environmental Services, Inc.

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**To:** Monica Styles – ETP and Nick Bryan - ETP  
**From:** David J. Demko P. G. - GES  
**cc:** Richard Wardrop, P.G. - GES  
**Date:** August 27, 2020  
**Re:** Modifications and Enhancements to Mitigation and Containment Measures for HDD S3-0360-16

Groundwater and Environmental Services, Inc. (GES), on behalf of Sunoco Pipeline L.P., provides the following further enhancements to the mitigation measures previously approved in the January 15, 2020 HDD Restart Report – including the Seep Monitoring Work Plan Addendum, as follows:

1. Increase PGs that are on-site to observe conditions during active operations at HDD 360 (i.e. until the pipe pullback is complete) from minimum requirement of 1 to 3 total: (1) PG stationed at northeastern/high Devon Drive side; (1) PG stationed at southeastern/Shoen Road side; and (1) PG stationed at seep location.
2. Enhancements to southeastern/Shoen Road side drill pit BMPs, including staging of additional sandbags and pumps “at the ready” to ensure that any additional surfacing of groundwater or mud at the site is controlled.
3. Staging of extra frac tanks (14 total) to accommodate any additional excess water hauling needs.
4. Increase the hauling of excess water during active drilling hours (i.e. 7 a.m. to 7 p.m. Monday-Saturday) so that the existing frac tanks on site maintain sufficient capacity adequate for water storage during evening hours, and so that less evening hauling would occur (to avoid evening hauling as an accommodation to residents and noise concerns).
5. Continued maintenance and inspection of perimeter BMPs (i.e. sock and silt fence) around the drilling area consistent with current permit requirements.
6. Seep management – primary sandbag dam is installed as per approved minor modification (5/20/20), and also installation of secondary sandbag dam as per field redline previously provided at the request of the Department and copy also sent to Chester County Conservation District. Sunoco field personnel will inspect the secondary containment and clean water pump/strawbale dewatering structure to ensure they have been installed in accordance with the submitted redline field drawings and are fully functional at all times. All turbid water will be contained and reused in the drilling process or pumped to the frac tanks for proper disposal off site.
7. All pertinent permits, plans, and approvals have been, and will continue to be, onsite in hard copy and reviewed with field personnel.



8. Submittal of daily PG's field notes of observations of the seep and groundwater during active construction, including submittal of any field sampling (pH, conductivity, color, or turbidity) that is taken as necessary under existing Seep Monitoring Work Plan Addendum protocols, submitted by 9:00 a.m. the next business day via email to: John Hohenstein; Desiree Henning Dudley; Frank DeFrancesco; and Rich Staron.

It is our understanding that there will be no further submittals of any HDD Restart Report for the surfacing of water in the seep (whether clear or turbid/discolored), an IR in the seep, or groundwater produced out of drill annulus, unless such water escapes from the containment structures or the BMPs otherwise fail to operate as designed.

If an IR or surfacing of water were to occur at some other location along this HDD profile (other than the seep location or groundwater produced out of the drill annulus) – including any overrunning of an existing containment structure – such an event would be subject to standard protocols in the HDD IR Plan, and the July 24, 2017 Consent Order and Agreement entered into between DEP and Sunoco, which would include the submittal and Department approval of an HDD Restart Report. To ensure prompt completion of this HDD, it is our understanding that PADEP will review such an HDD Restart Report and make a determination on that report within 5 business days.

Respectfully submitted,  
Groundwater & Environmental Services, Inc.

A handwritten signature in blue ink that reads "David J. Demko".



David J. Demko, P.G.  
Principal Hydrogeologist

*By affixing my seal to this document, I am certifying that to the best of my knowledge the information is true and correct. I further certify that I am licensed to practice in the Commonwealth of Pennsylvania and that it is within my professional geological expertise to verify the correctness of the information.*