



Transcontinental Gas Pipe Line Company, LLC

Response to Technical Deficiency
Pennsylvania Department of Environmental Protection

Atlantic Sunrise Project

July 31, 2017

DEP Application No. E36-947, APS No. 880147
Conestoga, Drumore, Manor, Martic, Mount Joy,
Rapho, Pequea, Eden, East Donegal, and West
Hempfield Townships and Borough of Mount Joy,
Lancaster County

Table 1
Transco's Responses to DEP July 11, 2017 Technical Deficiencies Letter

Technical Deficiency Number	Technical Deficiency Description	Response
1	<p>DEP review of the provided technical information found inconsistencies relative to identified resources in various reports, tables and narratives. For example, a review of the various access road site plans for AR-LA-009.1 identified the unnamed tributary to Pequea Creek as WW-T65-1. Conversely, it appears that Attachment E-2 PA DEP Impact Table (Impact #252) and Attachment H-2 Stream Disturbance for Access Road AR-LA-009.1 identified that same watercourse as WW-T31-003 or Pequea Creek. Please review all technical drawings, narratives, support documents, and calculations to assure that the identified resources, temporary impacts, permanent impacts, and technical information are consistently reported. Provide DEP with the appropriate revisions. [25 Pa. Code §105.13(e)]</p>	<p>The floodway identified within this temporary 105 impact is associated with stream WW-T31-003 (Pequea Creek); therefore, the Erosion & Sediment Control and Layout Plans for Access Roads and Erosion & Sediment Control Plan and Site Restoration Plan Narrative, both of which are included within Attachment M, include revisions to reference stream WW-T31-003 (Pequea Creek). The designated receiving water was revised from “UNT to Pequea Creek to “Pequea Creek” on drawing number 24-1600-70-28-A/LL113_9-AR-LA-009.1, Sheet 3 of 3 and on Appendix H, Worksheet 1 both of which are included within Attachment M.</p>

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2	<p>DEP review of listed watercourse Chapter 93 water quality designations in various technical information provided found inconsistencies when cross-checking those reported Chapter 93 designations with 25 Pa. Code § 93.90. Drainage List O (Susquehanna River). For example, a cross-check review of the Chapter 93 classification reported in Attachment E-2 PA DEP Impact Table for Brubaker Run (WW-T3 I -3005), indicated it was listed as TSP, MF, whereas a cross check of 25 Pa. Code § 93.90 found Brubaker Run listed as WWF, MF. Indian Run (WW-T36- 1007) was also reported being WWF, MF, whereas § 93.90 found Indian Run listed as TSP, MF. Please review all technical information, drawings, narratives and support documents to assure that the technical details being reported are accurate and consistent. Provide DEP with the appropriate revisions to the application. [25 Pa. Code §105.13(e)]</p>	<p>Previously, the PADEP recommended the use of their Geographic Information System (GIS) layer as the authoritative source for identification of watercourse names and respective Chapter 93 classification and existing uses for watercourse crossings within the Project, which is the procedure utilized to generate this information within the Application.</p> <p>The “Brubaker Run” and “Indian Run” and their respective Chapter 93 classifications identified within this technical deficiency are different watercourses than those that are crossed by the Project, as Transco demonstrated in the July 17, 2017 technical deficiency clarification conference call with the PADEP, which was confirmed via the PADEP’s GIS layer.</p> <p>With the confirmation via the PADEP GIS layer, as well as the PADEP’s acknowledgement of this approach and information, the classifications in the Ch. 105 impact tables match the spatial data (Brubaker Run = TSF, MF; Indian Run = WWF, MF); therefore, no revisions to this information were required for this technical deficiency.</p>

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3	<p>DEP cross-check review of the provided Attachment H-2 County Specific Impact Mapping with Access Road E&S Plans found existing structures were not consistently identified. For example, Attachment H-2 County Specific Impact Mapping (Drawing #24-1600-70-09-A/AR-LA-030-01) identified an existing road crossing of Shells Run (WW-T25-4002) as being constructed with a 15-inch diameter concrete culvert, whereas Access Road E&S Plans (Drawing #24-1600-70-09-A) for Access Road AR-LA-030 identified the same existing road crossing being constructed with a bridge. Please review all technical drawings, narratives, support documents, and calculations to assure that the identified resources, temporary impacts, and permanent impacts are consistently identified in the application. Provide DEP with the appropriate revisions to the application. [25 Pa. Code §105.13(e)]</p>	<p>The existing structure is an existing 15" concrete culvert with a concrete slab overtop. A timber matting air bridge is proposed to be installed over the culvert and concrete cap to protect the existing culvert and concrete cap from construction loads. The callouts on the Erosion & Sediment Control and Layout Plans for Access Roads (Attachment M) have been revised to clarify that the timber matting air bridge is a proposed improvement. The revised callout is shown on drawing 24-1600-70-28-A/LL113_9-AR-LA-030, Sheet 2 of 3 within the above referenced plans within Attachment M.</p>

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4	<p>DEP review of the provided technical information for floodway fill volumes found such volumes were not consistently reported in various reports, tables and narratives. For example, Attachment E-2 PA DEP Impact Tables (Impact #254) listed that 129.25-cubic yards of floodway fill will be placed, temporarily, for Access Road AR-LA-020 across an unnamed tributary to Strickler Run (WW-T25-2001), whereas the floodway fill volume was not reported in the corresponding Attachment H-2 County Specific Impact Mapping (Drawing #24-1600-70-09-A/AR-LA-020-01) for that same access road. Please review all technical drawings, narratives, support documents, and calculations to assure that the identified resources, temporary impacts, and permanent impacts are consistently identified and reported. Provide DEP with the appropriate revisions to the application. [25 Pa. Code §105.13(e)]</p>	<p>Transco inadvertently calculated fill volumes based on an older, expanded LODs for all access roads within a floodway that is no longer being proposed. Fill volumes have been recalculated to reflect the current reduced LOD within the Chapter 105 Impact Table and County-Specific Impact Mapping (Attachments E-2 and H-2, respectively).</p> <p>Cross sections were not provided for existing access roads because Transco is not proposing to grade, widen or otherwise modify the existing road cross section; however, Transco applied a worst case scenario by calculating a maximum one-foot fill for the extent of the LOD within floodways at existing access road locations. This additional fill volume will account for unanticipated field scenarios where a minor road expansion for turning radius or widening an existing gravel road may warrant placement of additional fill.</p> <p>To clarify that there is a difference between the actual proposed fill volume and the fill volume shown in the Chapter 105 Impact Tables within Attachment E-2; therefore, the following note has been added to the Chapter 105 Impact Table within Attachment E-2, the access road plans within the County-Specific Impact Mapping in Attachment H-2, and the Erosion and Sediment Control Plans and narratives associated with access roads within Attachment M:</p> <p>“The calculation of fill volumes provided within the Chapter 105 Application is based on the extent of the access road LOD within the floodplain/floodway to account for worst-case field scenarios requiring the addition of a one foot-depth of gravel for maintenance and/or minor access road widening for improved access. As such, the fill volume is an overestimation and does not reflect the actual volume of fill required by the current access road design, as presented within the Chapter 102 Permit. The inclusion of the overestimated fill volumes within the Chapter 105 Application limits future revisions to the Chapter 105 Application due to minor field adjustments; conversely, revisions to access road design after the 102 Permit issuance will be coordinated with PADEP/CCD.”</p>

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5	<p>DEP cross-check review of the technical information provided in Attachment H-2 County Specific Impact Mapping with the Access Road E&S Plan raised questions about how floodway fill volumes (although most are temporary) reported in Attachment H-2 correlated to the specified "typical roadway section" reported in corresponding Access Road E&S Plans. For example, Attachment H-2 (Drawing #24-1600- 70-09/AR-LA-030-01) reported 499.08-cubic yards of floodway fill, whereas the respective Access Road E&S Plan did not specify any "typical roadway section" to be constructed. The Access Road E&S Plan only specified minimal floodway fill to existing roadway which does not correlate or explain 499-cubic yards of floodway fill referred to in Attachment H-2. Please evaluate all technical drawings, narratives, support documents, calculations, construction specifications to assure that the technical information consistently, concisely correlates in all various plan sets and tables. Provide DEP with the appropriate revisions to the application. [25 Pa. Code §105.13(e)]</p>	<p>Please refer to the response to Technical Deficiency 4.</p>

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6	<p>DEP review of Attachment H-2 County Specific Impact Mapping with the proposed activities listed in Attachment E-2 PA DEP Impact Tables found mapped impacts were not consistently listed. For example, Attachment H-2 (Drawing #24-1600-70-09-A/8.00-01) depicted instream and floodway activities associated with surface water withdrawals, whereas under the water withdrawal section in the Attachment E-2 tables, this impact was not listed. Please evaluate all technical drawings, narratives, support documents, calculations, construction specifications to assure the technical information consistently and concisely correlates in all various plan sets and tables. Provide DEP with the appropriate revisions to the application. [25 Pa. Code §105.13(e)]</p>	<p>The water withdrawal location associated with Pequea Creek is located entirely within the impacts associated with the temporary construction right-of-way and installation of the 42” pipeline crossing of Pequea Creek. Therefore, rather than double-count impacts, this was included within Impact Numbers 45 and 47 in the Impact Table (Attachment E-2).</p> <p>For further clarification, as part of the revised Application included with the November 22, 2016 TD response, the locations of the water withdrawal equipment relative to wetlands, streams, floodways, and floodplains were included on the revised Chapters 102 and 105 drawings (Attachment M and Attachment H-2). Within the Lancaster TD 61 response in the above-referenced TD response, all withdrawal equipment will be overland and temporary. The intake structure and piping will be located in the floodway. The pump and other equipment will be kept out of the floodway. No piping will be placed in existing stream culverts. Cross sections, profiles, and hydraulic analysis of piping to be placed in stream channels were completed for the SRBC dockets. This information was provided in Attachment L-5, Appendix L-5 and L-6.</p> <p>Within the May 5, 2017 Revised Application and TD response package, Hydrotest Plans and Metering Plans were provided as Attachment L-5, Appendices 5 and 6, respectively. These plans were revised to include the floodplain and floodway boundaries for consistency with the County Specific Impact Mapping within Attachment H-2 and the Erosion and Sediment Control Plans within Attachment M.</p> <p>In addition, Note 7 was added to Impact Mapping (Attachment H-2) drawing number 24-1600-70-09-A/8.00-01 to indicate that the hydrostatic test water withdrawal equipment installation and operation will not result in earth disturbance. Additionally, E&S plan sheet 24-1600-70-28-A/LL113_9, sheet 8 of 34 (Attachment M) was revised to provide a note indicating that the withdrawal associated with Pequea Creek will not result in any earth disturbance.</p>

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7	<p>DEP cross-check review of the provided cultural resources evaluations with the subsequent Pennsylvania Historical and Museum Commission (PHMC) correspondence found one identified potential archeologic site and four above-ground historic sites that may require cultural resource evaluation clearance. Referenced in the PHMC March 22, 2017 correspondence, review staff understood Archeologic Site ID 36LA1535 could be under PHMC review. Review of Attachment D-1 (Table D-4) identified above-ground sites BHP Key #862287, BHP Key #862260, No BHP Key-Like Cemetery, and BHP Key #862288 which suggested PHMC coordination was pending. However, no PHMC documentation relative to these four above ground sites was found. If PHMC correspondence for the archeological site and four aboveground sites was provided to DEP in your May 2107 submission or as follow-up addendum, please provide DEP with direction as to where to locate this necessary PHMC documentation. If these cultural resources are under PHMC review, please acknowledge that this agency review is ongoing and provide DEP with copies of the PHMC final clearance letters. [25 Pa. Code § 105.13(e)(1)(x)]</p>	<p>The above-ground resources referenced above (BHP Key #862287, #862260, #862288 and the Like Cemetery) were included in the Addendum 6 architectural history report submittal (April 21, 2017), and are covered in the response letter, dated May 3,2017, which is included within the revised Attachment D-2 – PHMC Coordination.</p> <p>With regard to site 36LA1535 and the March 22, 2017 PHMC response letter indicates, Transco conducted Phase II testing of the portion of site 36LA1565 located within the Project LOD (Locus 1565). The above-referenced letter confirms that no further testing is necessary within the limits of the Project for this resource; therefore, no further consultation is required with the PHMC for this location/resource.</p>

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8	<p>Section L-5 Appendix L-2 Riparian Area Impact Assessment and Restoration Plan, Appendix B Tree and Shrub Planting List appears to reference the Department's Riparian Forest Buffer Guidance; however, your list does not include the "Comments" column as shown in the Department's Guidance which details species susceptibility to insects and disease. Please be sure to evaluate these potential impacts to plantings when designing your replanting plan and revise the application as appropriate. [25 Pa Code § 105.13(e)]</p>	<p>Appendix B of the Riparian Area Impact Assessment and Restoration Plans, provided in Attachment L-5, Appendix L-2, is updated to remove tree and shrub species susceptible to insects and disease, as noted in DEP's Riparian Forest Buffer Guidance, from the list of approved species for replanting.</p>
9	<p>The Hibred Farms Permittee Responsible Mitigation Plan (PRMP) includes three wetland and stream crossings that are referenced as "HIBRED FARMS PLAN, SHEET 4" in Attachment E-2 PA DEP Impact Table. Please revise the Plans to clearly identify crossings one through three. [25 Pa. Code § 105.13(e)(1)(i)(C)]</p> <p>Also, it appears that rock fill is planned to construct or augment agricultural crossings within the mitigation area. If the wetland and stream crossings identified on the Plans are intended to represent the existing agricultural crossings identified on Sheet 4, please explain why there is a need to impact these resources by placing fill if there will be no further agricultural activities in the mitigation area. [25 Pa. Code § 105.13(e)(1)(ix)]</p>	<p>The Plans have been revised to identify the three existing agricultural crossings (Existing Agricultural Crossings #1A, #1 and #2, respectively). Existing agricultural crossing #1A will be used during construction, however no rock fill will be used for this crossing as part of the restoration plan. This crossing will be left in place, as it is currently providing grade control and the stream is naturalizing with it in its existing location.</p> <p>Currently, crossings #1 and #2 are comprised of concrete slabs that if removed, would result in instability and upstream incision of the stream post restoration. Restoration activities will involve raising the stream bed via instream rock fill which will serve to improve the stream and floodplain connectivity. As a result of the stream bed elevation change, the crossings must also meet the new stream elevation to maintain a stable profile. As such, placement of rock fill within the existing agricultural crossings is needed to maintain the grade and integrity of the stream channel bed and banks. The additional armoring will also protect the bed and banks from high shear stresses that may occur during large storm events, providing an additional layer of support.</p>

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10	The PRMP Section 3.0 Site Selection references tile draining. Please explain proposed mitigation measures that are intended to address historic tile drains in the proposed mitigation area. [25 Pa. Code § 105.13(e)(1)(ix)]	A minimal presence of tile drains were observed onsite; however, those observed appeared to be dysfunctional as a result of damage over time. Transco does not anticipate the damaged tile drains to impact hydrology onsite; and therefore, Transco will leave the damaged tiles in place, unless performance monitoring indicated that the drain tiles are negatively affecting hydrology within the site. Primary hydrological impacts onsite are due to the installation of drainage ditches to drain the wetlands. While hydrology exists to feed surrounding wetlands, as discussed in the PRM Plan, Transco will improve existing hydrology via the installation of streambed grade control structures and through the filling of the incised stream. Filling the incised stream segment will raise the water level to a more consistent elevation, keeping the surrounding spring flows intact and thus restoring the wetland hydrology that had been negatively influence by ditching.
11	Notes on Sheet 06 -01 of the PRMP stated rock size is inconsistent with rock size identified in Attachment E-2 PA DEP Impact Table. Please clarify or revise the application as appropriate. [25 Pa. Code § 105.13(e)]	R6 rock control type will be used within the agricultural crossings and the rock ramp transition areas, while R3 rock control type will be used to fill the proposed channel bed. A revised version of the Chapter 105 Impact Table within Attachment E-2 is provided as part of this technical deficiency response package.
12	Please ensure that the Monitoring Requirements described in Section 10 of the PMRP meet, at a minimum, the monitoring guidelines found in the Department's " <i>Design Criteria for Wetlands Replacement</i> ". [25 Pa. Code §105.20a.(b)]	As requested, the Monitoring Requirements described in Section 10 of the Permittee Responsible Mitigation Plan have been revised to meet the Department's "Design Criteria for Wetlands Replacement", which are provided as replacement pages for Attachment Q-2 as part of this response package.