



Transcontinental Gas Pipe Line Company, LLC

Response to Technical Deficiency
Pennsylvania Department of Environmental Protection

Atlantic Sunrise Project

November 18, 2016

DEP Application No. E38-195, APS No. 880147
Cold Springs, East Hanover, North Annville, South
Annville, South Londonderry, Swatara, North Lebanon
and Union Townships, Lebanon County

Table 1
Transco's Responses to DEP July 29, 2016 Technical Deficiencies Letter

Technical Deficiency Number	Technical Deficiency Description	Response
1	<p>Upon further evaluation by the Pennsylvania Department of Environmental Protection (PA DEP) and in accordance with the 25 Pennsylvania (PA) Code § 105.13(e), complete delineation of impacts to wetlands, streams and flood ways needs to be provided for the PA DEP to perform the required environmental review of the application and make a proper permit decision. The impacts to wetlands, streams and floodways cannot be based on remote sensing. 25 PA Code § 105.13(e)(1)(i)(A) requires a complete demarcation of the floodplains and regulated waters of this Commonwealth on the site. This requirement will not be waived under 25 PA Code §105.13(k) as remote sensing or national wetland inventory data alone may not identify all wetlands, streams and flood ways present, nor does it adequately identify any unique characteristics of the wetlands, or the functions that they provide. As such, the remote sensed impacts will require in field verification, and all relevant portions of the application will need to be revised prior to making a permit decision. <i>[25 PA Code §105.13(e)]</i></p>	<p>Transco has provided an updated permit application package that includes changes made to the Project (e.g., minor alignment and workspace modifications) and new field survey data collected since the original application was submitted on July 29, 2016. With this supplemental information, the updated application provides field-verified data for 96 percent of the Project and for 94 percent of Lebanon County. Transco continues to coordinate with landowners to obtain survey access for the remaining four percent of the Project area, including the no-survey parcels in Lebanon County, and will periodically file updated survey information for survey in Lebanon County as access is granted in these areas. Field verified data collected to date is included in Attachment L-5, Enclosure D, Section B, and the impacts are included in Attachment E-2 and the Impact Mapping is included in Attachment H-2.</p> <p>For mitigation planning and Project design, remote sensed (RS) data is included in the impact table in Attachment E-3 and on the impact mapping in Attachment H-2.</p> <p>Transco appreciates the PA DEP's commitment to proceed with its review based on the substantial amount of field-verified information that is available at this time.</p>

Technical Deficiency Number	Technical Deficiency Description	Response
2	Several flume crossings are shown in the Erosion and Sedimentation (E&S) Control Plan sheets along the length of the pipeline. Clarify, with the drawings, if the flume crossing is proposed in a regulated waterway. If the crossings are located within a regulated waterway, provide a detailed impact table for the resource crossing identifying all the impacts associated with this crossing. Revise all other application documents to reflect any additional impacts. <i>[25 PA Code §105.13(e)(1)(x)]</i>	The revised Application clarifies that proposed “Clean Water Crossings” are stormwater runoff conveyance / E&S Best Management Practices (BMP/BMPs), not flumed crossings of regulated waterways. The following note has been added to the Chapter 102 drawings: “Proposed clean water crossing shown herein are temporary stormwater runoff conveyance BMPs associated with the Chapter 102 ESCGP-2 application. No flows from regulated waterways are intended to be conveyed within these BMPs.” The Revised Chapter 102 drawings are included in Attachment M.
3	Provide adequate provisions for shut-off in the event of break or rupture. Provide locations and description of how this action will be completed in the event rupture occurs. <i>[25 PA Code §105.301(9)]</i>	Attachment J (Project Overview, New Mainline Valves and Tie-In Assemblies) of the revised Application includes a description of the provisions for shut-off in the event of a pipeline rupture or break.

Technical Deficiency Number	Technical Deficiency Description	Response
4	<p>Provide agency clearance letters and copies of correspondence from the Pennsylvania Fish and Boat Commission (PFBC), Pennsylvania Game Commission (PGC), Pennsylvania Department of Conservation and Natural Resources (PDCNR), and U.S. Fish and Wildlife Service (USFWS) for the proposed pipeline, including no-access parcels, and the mitigation area, and identify any mitigation measures that are recommended or required. Please be advised that additional deficiencies may be generated pending responses from resource agencies. [25 PA Code §105.14(b)(4)]</p>	<p>The revised Application includes a County-specific summary of correspondence received from the PFBC, PGC, PDCNR, and USFWS in Attachment G-1, which correlates with the Pennsylvania Natural Diversity Inventory (PNDI) review of the pipelines, access roads, and ancillary facilities. The summary also includes a discussion of any mitigation measures recommended or required. Transco has received final clearance letters from the PGC, PFBC, and PDCNR for the Project. The USFWS is consulting with the Federal Energy Regulatory Commission (FERC) regarding federally listed species; Transco expects resolution in fourth quarter 2016. Copies of the respective correspondence referenced in the summary are provided in Attachments G-2 through G-5.</p> <p><u>Hibred Farms PRM Site:</u> The PNDI receipt for the Hibred Farms Permittee-Responsible Mitigation (PRM) Site indicated that no known impacts to threatened and endangered species and/or special concern species and resources under jurisdiction of the PGC and PDCNR within the PRM Site; however, there may be potential impacts to threatened and endangered and/or special concern species and resources under the jurisdiction of the PFBC and USFWS within the PRM Site. The PFBC and USFWS correspondence is provided in Attachment Q-2, Appendix E, Exhibit 1.</p>

Technical Deficiency Number	Technical Deficiency Description	Response
5	<p>Provide clearance or approval from the Pennsylvania Historical and Museum Commission (PHMC) for cultural, archeological, and historic resources for the proposed water obstructions and encroachments, mitigation area, and areas necessary to construct the water obstructions and encroachments. [25 PA Code §105.13(e)(1)(x), §105.14(b)(4), §105.14(b)(5)]</p>	<p>The revised Application includes a summary of coordination with the PHMC for the pipelines, access roads, and ancillary facilities within Attachment D-1 and copies of relevant clearance/approval letters identified within the above-mentioned summary within Attachment D-2.</p> <p>Transco is coordinating with PHMC and FERC to develop a Memorandum of Agreement (MOA) to address Section 106 compliance and will include procedures for assessing impacts for inaccessible properties, and protocols for handling chance finds. Transco will survey, document, report, and request clearance for all inaccessible properties.</p> <p><u>Hibred Farms PRM Site</u>: In a letter dated May 17, 2016, the PHMC indicated that although historic buildings, structures, and/or archaeological resources may be located in or near the Project area, no effects on these resources are anticipated as a result of the Hibred Farms PRM Site activities. The final clearance letter is provided in Attachment Q-2, Appendix E, Exhibit 2.</p>
6	<p>Provide plans or a detail for the restoration of stream beds at open cut stream crossings. This should include replacement of native stream bed material. This should include replacement of native stream bed material and assurance that no significant changes in bed grade occur. [25 PA Code §105.13(e)(1)(i)(G), §105.13(e)(1)(ix), §105.1, Mitigation, §105.13(e)(1)(x), §105.15(a)(1), §105.14(b)(4), §105.16(d), §105.13(e)(1)(i)(G), §105.242(c)]</p>	<p>The revised Application includes a typical detail for streambed restoration (see SBR Detail in the BMPs and Quantities Plan Set within Attachment M - provided under separate cover).</p>

Technical Deficiency Number	Technical Deficiency Description	Response
7	Explain how the final "restored" wetland elevations will be determined. <i>[25 PA Code §105.13(e)(1)(ix)]</i>	The revised Application (Attachment L-5, Section B1) has been updated to indicate that final wetland elevations will be determined using civil survey (sub-centimeter accuracy) data collected prior to construction.
8	It appears that several waters of the Commonwealth could be crossed using trenchless installation methods. Provide a revised alternatives analysis that incorporates a discussion of alternative crossing techniques (e.g., conventional bore, horizontal directional drill [HDD], micro-tunneling) addressing each resource crossing individually and explaining why trenchless installation methods are not appropriate. <i>[25 PA Code §105.13(e)(1)(viii), §105.18a]</i>	Attachment P-1, Appendix P-2 of the revised Application includes a revised alternatives analysis that incorporates a discussion of alternative crossing techniques for each resource crossing and whether a trenchless method is or is not appropriate.

Technical Deficiency Number	Technical Deficiency Description	Response
9	<p>The following deficiencies relate to the proposed HDD [25 PA Code §105.3(a)(4), §105.11(a)(4), §105.13(e)(1)(i), §105.13(e)(1)(iii), §105.13(e)(1)(x), §105.14(b)(4), §105.301(1), §105.301(7), §105.301(5), §105.301(3), §105.151(1), §105.151(3), §105.161(a)(3), §105.161(a)(4)]:</p> <ul style="list-style-type: none"> a. Provide plans and cross sections indicating pipe size, placement, and locations for all wetlands, streams, floodways and floodplains where the testing discharges are proposed. The cross sections should depict, at a minimum, the proposed structures, resource boundaries, stream bed and banks, water surface elevation. b. Provide a description and plans of how the water will be discharged, the methods to be utilized, what equipment and structures are proposed to be placed and utilized in waters of the Commonwealth, the length of time which obstructions will remain in place. c. Provide cross sections, profiles, and hydraulic analysis for piping placed in existing stream culverts and along and within stream channels. d. Identify on the plans the location of the proposed HDD electric guide wire, and provide an analysis to show that the wire will not present a hazard to river users. 	No HDDs are planned in Lebanon County.

Technical Deficiency Number	Technical Deficiency Description	Response
10	<p>Public water supplies are located within in the vicinity of the proposed pipeline. The application states that there will not be any impacts the water supplies as a result of the pipeline. Provide the supporting documentation that led to this conclusion. Additionally, we recommend that you contact any public water supplier in order to help determine if your project will impact the public water supplier and subsequently provide documentation of interactions, through correspondence, with each supplier. Ensure all Public water supplies in the vicinity of the proposed pipeline are identified within the location map. Enclosed are instructions on how to utilize PA DEP's eMapPA to identify public water supplies in the vicinity of your project. [25 PA Code §105.13 (e)(1)(ii)]</p>	<p>Transco identified potable and non-potable surface water intake structures in proximity to the Project (less than three miles downstream of a Project watercourse crossing) in Lebanon County using eMapPA. Attachment L-5, Enclosure D, Items B2d and e of the revised Application has been updated to address public water supplies and includes a table of correspondence with the Lebanon Water Authority. The Pennsylvania Project Location Map (Attachment I-2) has been updated to include the identified surface water intake that is discussed in the revised Attachment L-5, Section B2d and e.</p>

Technical Deficiency Number	Technical Deficiency Description	Response
11	<p>The application states that topsoil will be segregated. Provide a revised Enclosure D of the Environmental Assessment that explains how the topsoil depth will be determined in the field. [25 PA Code §105.15(a) §105.15(b), <i>Environmental Assessment Form Instructions</i>]</p>	<p>The Transco Project-specific Wetland and Waterbody Construction and Mitigation Procedures (Attachment 18 of the Environmental Construction Plan [ECP]) and Agricultural and Construction Monitoring Plan (Attachment 6 of the ECP) indicate that the top 12 inches of topsoil from wetland and agricultural areas disturbed by trenching will be segregated from subsoil, except in areas where standing water is present, soils are saturated, or where shallow depth to bedrock conditions exist. These exceptions will be identified via visual assessment during grading and documented in the field with the Environmental and/or Agricultural Inspector. Immediately after backfilling is complete, the segregated topsoil will be restored to its original horizon location. Attachment L-5, Section B1 has also been revised to reflect this.</p> <p>Pipeline construction personnel are familiar with this FERC mandated practice and are knowledgeable of the visual differences between topsoil and subsoil (color, texture) in order to make the determination of topsoil depth that needs to be segregated.</p>

12	Revise the application to provide a planting plan to re-establish woody vegetation within the temporary construction right-of-way (ROW) in riparian and wetland areas that are currently forested or dominated by woody species, as was previously proposed and implemented by Williams Transco on a similar project. [25 PA Code §105.13(e)(1)(ix), §105.16(d)]	The revised Application includes a Riparian Area Impact Assessment and Restoration Plan (Attachment L-5, Appendix L-3). Transco has determined that the proposed permanent conversion of forested riparian buffer to herbaceous riparian buffer affects a relatively small fraction of the overall riparian buffer for each affected watercourse and the larger watershed. In addition, the remaining herbaceous riparian vegetation will continue to provide beneficial functions related to water quality. Therefore, any potential changes in riparian area function will be minor and isolated to the 10-foot-wide maintenance corridor centered over the pipeline within the permanent easement and will not result in the degradation of the existing stream uses or associated water quality. However, as an additional re-establishment measure, Transco is proposing to voluntarily replant riparian forest buffers crossed by the Project. Replanting will occur within the regulated floodplain (Federal Emergency Management Agency [FEMA] mapped 100-year floodplain or 50-foot-wide floodway if no FEMA-mapped floodplain is present, whichever is greater). Transco is also proposing to replant in areas where Chapter 102 riparian buffer waivers are being requested. In all instances, replanting will occur in the construction workspace outside of the 10-foot-wide maintenance corridor over the pipeline. Transco will replant the 50-foot-wide permanent ROW by applying a riparian seed mix. Outside of the permanent ROW, to the edge of the construction workspace and within the regulated floodplain, Transco will reestablish the riparian buffer by planting trees and shrubs. During operation of the pipeline, Transco will maintain herbaceous cover within the 10-foot corridor centered over
----	--	---

Technical Deficiency Number	Technical Deficiency Description	Response
		<p>the pipeline. Outside of the 10-foot corridor, maintenance will be limited to selective trimming and clearing of large trees (greater than 15 feet in height) within 15 feet of the pipeline.</p> <p>Transco is proposing compensatory off-site mitigation for Project-related impacts to palustrine forested (PFO) and palustrine scrub-shrub (PSS) wetlands, as detailed within the Mitigation Master Plan and Permittee Responsible Mitigation Plan, which are provided within Attachments Q-1 and Q-2 of the revised Application.</p>

<p>13</p>	<p>The functions and values provided by shrub species more closely match those provided by forested areas than are provided by emergent areas. Revise the plans to incorporate the replanting of woody species in forested/ scrub shrub areas in the permanent ROW. [25 PA Code §105.13(e)(1)(ix)]</p>	<p>The revised Application includes a Riparian Area Impact Assessment and Restoration Plan (Attachment L-5 Appendix L-3). Transco has determined that the proposed permanent conversion of forested riparian buffer to herbaceous riparian buffer affects a relatively small fraction of the overall riparian buffer for each affected watercourse and the larger watershed. In addition, the remaining herbaceous riparian vegetation will continue to provide beneficial functions related to water quality. Therefore, any potential changes in riparian area function will be minor and isolated to the 10-foot-wide maintenance corridor centered over the pipeline within the permanent easement and will not result in the degradation of the existing stream uses or associated water quality. However, as an additional re-establishment measure, Transco is proposing to voluntarily replant riparian forest buffers crossed by the Project. Replanting will occur within the regulated floodplain (Federal Emergency Management Agency [FEMA] mapped 100-year floodplain or 50-foot-wide floodway if no FEMA-mapped floodplain is present, whichever is greater). Transco is also proposing to replant in areas where Chapter 102 riparian buffer waivers are being requested. In all instances, replanting will occur in the construction workspace outside of the 10-foot-wide maintenance corridor over the pipeline. Transco will replant the 50-foot-wide permanent ROW by applying a riparian seed mix. Outside of the permanent ROW, to the edge of the construction workspace and within the regulated floodplain, Transco will reestablish the riparian buffer by planting trees and shrubs. During operation of the pipeline, Transco will maintain herbaceous cover within the 10-foot corridor centered over</p>
-----------	--	---

Technical Deficiency Number	Technical Deficiency Description	Response
		<p>the pipeline. Outside of the 10-foot corridor, maintenance will be limited to selective trimming and clearing of large trees (greater than 15 feet in height) within 15 feet of the pipeline.</p> <p>Transco is proposing compensatory off-site mitigation for Project-related impacts to PFO and PSS wetlands, as detailed within the Mitigation Master Plan and Permittee Responsible Mitigation Plan, which are provided within Attachments Q-1 and Q-2 of the revised Application.</p>
14	<p>Several streambank stabilization methods are proposed in the E&S Control Plans. Identify where each type of stabilization measure will be utilized. <i>[25 PA Code §105.21(a)(1)]</i></p>	<p>The revised Application (Attachment L-5, Appendix L-4) includes a table that identifies each stream and which stream restoration detail is to be utilized on either bank.</p>
15	<p>Revise the alternatives analysis to show the 600-foot survey corridor and demonstrate that impacts to waters of the Commonwealth within the corridor have been minimized to the maximum extent practicable. The demonstration should address each crossing individually. <i>[25 PA Code §105.13(e)(1)(viii), §105.18(a)]</i></p>	<p>The revised Application includes a revised alternatives analysis (Attachment P-1) demonstrating that impacts to waters of the Commonwealth have been minimized to the maximum extent practicable. Appendix P-1 documents measures to avoid and minimize impacts to each crossing individually.</p>
16	<p>The application incorrectly identifies watercourses as "waterbodies". Watercourses and bodies of water are defined differently under Chapter 105. Provide revised copies of all applicable documents. <i>[25 PA Code §105.21(a)(1)]</i></p>	<p>The revised Application identifies bodies of water and watercourses as defined under Chapter 105.</p>

Technical Deficiency Number	Technical Deficiency Description	Response
17	The application states that blasting may be required to install the proposed pipeline. Clarify if blasting will be necessary in or along waters of the Commonwealth, and identify where it will be proposed. Please be advised that a blasting permit from the Pennsylvania Fish and Boat Commission may be needed. <i>[25 PA Code §105.21(a)(1)]</i>	Transco anticipates the use of blasting in bodies of water or watercourses; however, Transco will not know for certain until construction activities commence. Watercourses with a higher potential for blasting are those with shallow depth to bedrock, as presented in Attachment L-5, Enclosure D, Section B1 in Table L(d)-3 of the revised Application. Transco's construction contractor will be required to demonstrate that blasting is necessary by first attempting to remove bedrock material using mechanical means, such as a hydraulic ram or splitter, rock trenching machine, or rock saw Transco has submitted an Application for use of Explosives in Commonwealth Waters to the PFBC for each proposed stream crossing in the event that blasting of bedrock is required properly install the pipe.
18	An Aids to Navigation (ATON) plan may be required for this project. Contact Thomas Burrell with the PFBC at 717.705.7838 regarding ATON requirements, and provide a copy of the ATON approval to the PA DEP. <i>[25 PA Code §105.14(b)(2)]</i>	In coordination with Captain Burrell (PFBC), two locations in Lebanon County require an ATON permit; which were submitted to the PFBC on October 4, 2016 (see Attachment L-5, Enclosure D, Section B4f).
19	The Joint Permit Application Plans shall be the final plans for construction. Remove the reference to "Preliminary/Draft" from all plan sheets. <i>[25 PA Code §105.13(e)(1)(i)(C)]</i>	The revised Application includes an updated set of drawings (with stationing) (Attachment H-2) and removes the inadvertent reference of "Preliminary/Draft".

Technical Deficiency Number	Technical Deficiency Description	Response
20	Installation of trench plugs as depicted in the profile view on the E&S Control Plans is likely to result in adverse impacts to the hydrology of waters of the Commonwealth. Provide a revised detail showing the trench plug continuing to the bottom of the trench instead of the top of the bedding material. <i>[25 PA Code §105.18a]</i>	The E&S Control Plans' detail associated with trench plugs, included within the Trench Plug Installation (TP) typical detail located in the BMPs and Quantities Plan set as Attachment M (provided under separate cover) in the revised Application, has been revised to depict the trench plugs continuing to the bottom of the trench.
21	The application states in numerous locations that the criteria used during routing surveys included "minimizing effects at any single wetland crossing to 1 acre or less whenever practicable". The PA DEP is unable to determine why the 1 acre threshold was utilized when Chapter 105 regulations require minimizing impacts to wetlands to the maximum extent practicable. Revise the application to demonstrate that the routings avoid and minimize wetland impacts to the maximum extent practicable. Transco should assess the applicability of this deficiency to the other counties that are part of this project. <i>[25 PA Code §105.13(e)(1)(vii), §105.18a]</i>	<p>The revised Application (Attachment L-5) clarifies that the routing process was designed to minimize Project-related impacts on all streams and wetlands, regardless of the extent of Project-related impacts.</p> <p>The revised Application (Attachment P-1, Appendix P-1) includes a revised alternatives analysis demonstrating that impacts to each crossing of waters of the Commonwealth within the 600-foot wide routing corridor have been minimized to the maximum extent practicable.</p> <p>See also response to Technical Deficiency 15.</p>

<p>22</p>	<p>According to the Hydrologic & Hydraulic (H&H) Calculations for Waterbody Crossings several waterbody crossings are to be crossed by a dam and pump method. Many of these crossings have excessive Peak Flows that could not be managed by pumping. Detail how these crossings will be stable and how the waterbodies will be successfully passed through or around the work area. Provide tables in the plan drawings depicting pump sizing and rate information to be used by contractors. [25 PA Code §105.16]</p>	<p>Stream crossings are to be performed during low flow conditions with oversight from an environmental inspector. Storm event weather forecasts will be monitored prior to and during the stream crossing. This note has been added to the Notes Sheet on the Water Obstruction and Encroachment Permit Impact Maps in Attachment H-2. The contractor will be required to maintain an adequate number of pumps on-site to facilitate an unanticipated increase in stream flow.</p> <p>County specific H&H reports are provided for the project. The reports specify the various crossing methods used, including flume, dam and pump, dry open cut, conventional bore and HDD. The reports also indicate the required time to complete each of the various types of crossings. Details of each crossing type are provided in Appendix A of each report.</p> <p>The crossing methods have been revised on a waterbody by waterbody basis considering the flow characteristics of the waterbody (which are provided in the tables in each H&H Report Appendix B, included as Appendix M of this revised Application). Crossing methods have been chosen (and/or updated) such that, at a minimum, normal flow is safely conveyed past the construction workspace. Additionally, further details and requirements regarding crossing stabilization have been added. For example, Section 1.2 of the H&H Report specifies that Contractors are required to meet the following performance criteria for dam and pump type crossings:</p> <ul style="list-style-type: none"> • Sufficient pumps to maintain 1.5 times the flow present in the stream at the time of construction; • At least one back up pump available
-----------	---	--

Technical Deficiency Number	Technical Deficiency Description	Response
		<p>on site in case of mechanical failure;</p> <ul style="list-style-type: none"> • Dams constructed with materials that prevent sediment and other pollutants from entering the waterbody (e.g. sandbags or clean gravel with plastic liner); • Streambed scour prevented at pump discharge; and • Dam and pumps shall be monitored to ensure proper operation throughout the waterbody crossing. <p>The stream flow information provided in H&H Report Appendix B (included as Appendix M of this revised Application) will be utilized along with actual site conditions and forecasted weather at the time of construction.</p>
23	<p>The H&H report, Peak Flow Calculations depict culvert pipe diameter and number of culvert pipes for some crossings but not all. Some crossings state "Cross When No Storm Forecasted" in the Flume Diameter and Number of Pipes columns. Provide crossing types and sizing data for these crossings. <i>[25 PA Code §105.161]</i></p>	<p>Stream crossings are to be performed during low flow conditions with oversight from an environmental inspector. Storm event weather forecasts will be monitored prior to and during the stream crossing. Many of the stream crossings have been adjusted to reflect a dam and pump method (Attachment E-2). See also response to Technical Deficiency 22.</p> <p>The H&H reports (included as Appendix M of this revised Application) have been updated to provide size and number of flume pipes for each flume type crossing. A crossing table is provided in H&H Report Appendix B, included as Appendix M of this revised Application.</p>

Technical Deficiency Number	Technical Deficiency Description	Response
24	<p>In reviewing the plans (profile view), trench plugs are indicated to be installed at wetland/upland interfaces. Additional trench plugs may be necessary along the length of the crossing due to length and/or slope to maintain hydrology throughout the wetland. Please review and revise accordingly. Some additional guidance is available within the PA E&S Control BMP Manual. [25 PA Code §105.13(e)]</p>	<p>The Chapter 105 impact drawings have been revised to include additional trench plugs and are included within Attachment H-2 of the revised Application.</p>
25	<p>Provide a detailed impact map identifying all the impacts associated with the following crossings. Revise all other application documents to reflect the additional impacts [25 PA Code §105.13(e)(1)(viii), §105.13(e)(1)(x)].</p> <ul style="list-style-type: none"> a. Access road AR-LE-044 crosses waterway WW-T31-5003. This is also shown on the ES Plan Drawing 24-1600-70-28-A/LL113_9-AR-LE-044. b. Access road AR-LE-050.3 appears to cross a waterway and the associated assumed floodway. This is also shown on the ES Plan Drawing 24-1600-70-28-A/LL113_9-AR-LE-050.3. c. For the crossing of Waterway WW-T25-6001 identifying all the impacts associated with this crossing. Revise all other application documents to reflect any additional impacts. d. For the crossing of Waterway WW-T33-6001A identifying all the impacts associated with this crossing. 	<p>Detailed impact maps for the indicated crossings are included with the revised Application (Attachment H-2). The other impact drawings (maps) have been revised to include additional information, as requested.</p> <ul style="list-style-type: none"> a. Access Road AR-LE-044 has been removed from the workspace. Therefore no impact drawing will be provided for the access road. b. Detailed impact map identifying Access Road AR-LE-050.3 has been provided in the latest permit application (Drawing 24-1600-70-09-A/AR-LE-050.3-01). c. Impact Map of Access Road AR-LE-052 has been provided in the latest permit application depicting impacts to the Waterway WW-T25-6001. LOD has been reduced to minimize the impact to the Waterway WW-T25-6001 (Drawing 24-1600-70-09-A/AR-LE-052-01). d. Impact Map of Access Road AR-LE-052.1 has been provided in the latest permit application depicting impacts to the Waterway WW-T33-6001A. LOD has been reduced to minimize the impact to the Waterway WW-T25-6001 (Drawing 24-1600-70-09-A/59.32-01).

Technical Deficiency Number	Technical Deficiency Description	Response
26 _____	<p>Provide an Impact Map for the following items. Revise all other application documents to reflect the additional impacts. [25 PA Code §105.13(e)(1)(viii), §105.13(e)(1)(x)]</p> <ul style="list-style-type: none"> a. For the entrance off of Green Point School Road on Access Road AR-LE-52.1, as is shown on ES Plan Drawing 24-1600-70-28-A/LL113_9-AR-LE-052.1. It is in the floodway of a waterway. b. For the resource crossing WW-T10-7004 between Mile 62.0 and Mile 63.0 as is shown on Drawing Number 24-1600-70-14-A/36.51-01, Sheet 7. c. For the resource crossing WW-T10-2006 as is shown on ES Plan Drawing 24-1600-70-28-A/LL113_9, Sheet 19 of 28. d. For the resource crossings WW-RS-T10-6001A and WW-RS-6001 as is shown on ES Plan Drawing 24-1600-70-28-A/LL113_9, Sheet 20 of 28. e. For the resource crossing WW-RS-6003 as is shown on ES Plan Drawing 24-1600-70-28-A/LL113_9, Sheet 24 of 28, near Station 16+00. 	<p>Detailed impact maps for the indicated locations are included with the revised Application (Attachment H-2). The other impact drawings (maps) are revised to include additional information, as requested.</p> <ul style="list-style-type: none"> a. Impact Map of Access Road AR-LE-052.1 has been provided in the latest permit application depicting impacts to the Waterway WW-T33-6001A. LOD has been reduced to minimize the impact to the Waterway WW-T25-6001 (Drawing 24-1600-70-09-A/59.32-01). b. Impact Map for the resource crossing WW-T10-7004 has been provided in the latest permit application (Drawing 24-1600-70-09-A/62.52-01) c. Impacts to resource WW-T10-2006 has been eliminated and is not impacted by the Project. Therefore, no Impact Map is provided. d. Resources WW-RS-6001A and WW-RS-6001 are not impacted by the Project. Therefore, no Impact Maps are provided. e. Resource WW-RS-6003 is not impacted by the Project. Therefore, no Impact Map is provided.

27	<p>Reductions of Limits of Disturbance in regulated waters could result in reduced impacts. It is recommended that the regulated waters of the project be re-evaluated and construction limits be reduced where possible to eliminated or reduce project impacts. It appears that the following impacts can be avoided or reduced for the following locations. It is shown to be possible for several other resource crossings. Revise the plans, incorporate these alternatives to avoid or limit the impacts or provide justifications for why the avoidance or reduction cannot be performed at these locations. [25 Pa Code §105.13(e)(1)(viii), §105.13(e)(1)(x), §105.21(a)(1)]</p> <ul style="list-style-type: none"> a. Impact Map 24-1600-70-09-A/AR-LE-033.1-01, Sheets 1 and 2, Stream WW-RS-4003 - could be avoided by relocating the pipeline to the southwest. b. Impact Map 24-1600-70-09-A/37.25-01 Stream WW-T30-4003 - the impacts to the regulated Water could be minimized by reducing the Limit of Disturbance (LOD) from the center of the pipeline. c. Impact Map 24-1600-70-20-A/37.52-01, Wetland W-T96-4003A and Wetland W-T96-4003C, - can be minimized by reducing the LOD from the center of the pipeline. d. Impact Map 24-1600-70-09-A/37.54-01, Stream WW-T30-4002, - could be minimized by reducing the LOD from the center of the pipeline. e. Impact Map 24-1600-70-20-A/37.85-01, Wetland W-T11-4004 - could be minimized by reducing the LOD from the center of the pipeline. f. Impact Map 24-1600-70-20-A/37.85-01 Wetland W-T11-4004 - It appears that impacts could be reduced or eliminated by relocating the pipeline to the east. Revise the plan to minimize the impact or provide justification for why the pipeline cannot be relocated in this area. g. Wetland W-T11-4003, Impact Map 24-1600-70-20-A/38.50-01 - by relocating the pipeline to the southeast. h. Impact Map 24-1600-70-20-A/38.61-01, Wetland W-T11-4002, by relocating the pipeline to the southeast. i. Impact Map 24-1600-70-20-A/38.72-01, Wetland W-T18-4003 - by relocating the pipeline to the southeast. j. Impact Map 24-1600-70-09-A/38.82-01, Stream WW-T18-4002 - by relocating the pipeline to the southeast. 	<p>Transco has re-evaluated each individual crossing and modified or reduced the construction limits wherever possible to eliminate or reduce impacts. Modifications to the construction limits for each individual crossing are provided in Attachment P-1, Appendix P-1 of the revised Application. Responses to each request in technical deficiency #27 are also provided below.</p> <ul style="list-style-type: none"> a. Stream WW-RS-4003 is no longer impacted by the Project and has been removed from the revised Application. b. LOD has been reduced to 90' to minimize impacts to WW-T30-4003. c. LOD has been modified to reduce impacts to W-T96-4003A and eliminate impact to W-T96-4003C. This wetland does not cross the entire LOD, but portions of the wetland encroach within the northern and southern ends of the construction workspace. Both sides of the LOD were reduced by 10' to minimize impacts to W-T96-4003. This LOD reduction resulted in elimination of impacts to the forested portion of the wetland (W-T96-4003C). d. LOD has been reduced to 90' to minimize impacts to WW-T30-4002. e. LOD has been reduced to 75' to minimize impacts to W-T11-4004. f. This wetland is a disturbed agricultural ditch/swale that extends beyond the limits of the routing corridor; therefore, a route adjustment to avoid impacts was not
----	---	---

	<ul style="list-style-type: none"> k. Impact Map 24-1600-70-09-A/39.25-01, Stream WW-T43-4001 - could be reduced by relocating the pipeline to the southwest. l. Impact Map 24-1600-70-09-A/39.25-01, Stream WW-T43-4001 - could be minimized by reducing the LOD from the center of the pipeline. m. Impact Map 24-1600-70-20-A/39.51-01, Wetland W-T32-4001 - could be minimized by revising the eastern LOD boundary. n. Impact Map 24-1600-70-20-A/40.55-01, Wetland W-T13-4001 - could be avoided by relocating the pipeline to the east. o. Impact Map 24-1600-70-09-A/40.55-01, Stream WW-T13-4001 - could be avoided by relocating the pipeline to the east. p. Impact Map 24-1600-70-09-A/41.06-01, Stream WW-T13-4002 and Stream WW-T13-4002A - could be minimized by reducing the LOD from the center of the pipeline. q. Impact Map 24-1600-70-09-A/41.06-01, Stream WW-T13-4002A - could be avoided by relocating the pipeline to the west. r. Impact Map 24-1600-70-09-A/41.13-01, Stream WW-T13-4005 and floodway of Stream WW-T13-4005A - could be minimized by reducing the LOD from the center of the pipeline, s. Impact Map 24-1600-70-09-A/41.13-01, Stream WW-T13-4005 and floodway of Stream WW-T13-4005A - could be avoided by relocating the pipeline to the east. t. Impact Map 24-1600-70-20-A/41.17-01 Wetland W-T13-4005 - could be avoided by reducing the LOD from the center of the pipeline. u. Impact Map 24-1600-70-20-A/41.17-01 Wetland W-T13-4005 - could be avoided by relocating the pipeline to the southwest. v. Impact Map 24-1600-70-20-A/41.28-01, Wetland W-T13-4004 - could be avoided by relocating the pipeline to the east. w. Impact Map 24-1600-70-09-A/41.28-01, Stream WW-T13-4004, - could be minimized by reducing the LOD from the center of the pipeline. 	<p>implemented. The LOD has been reduced to 75' to minimize impacts to this wetland.</p> <p>g. The pipeline was field routed in this location to follow a property line and avoid impacting interior row crops. Therefore, the route was not adjusted southeast to avoid impacting this wetland. This wetland encroaches within the western portion of the LOD only, and this portion of the LOD was reduced by 10' to minimize impacts.</p> <p>h. LOD has been modified to eliminate impacts to this wetland.</p> <p>i. The pipeline was field routed in this location to follow a property line and avoid impacting interior row crops. Therefore, the route was not adjusted southeast to avoid impacting this wetland. This wetland encroaches within the western portion of the LOD only, and this portion of the LOD was reduced by 10' to minimize impacts.</p> <p>j. LOD has been modified to eliminate impacts to this stream.</p> <p>k. LOD has been modified to eliminate impacts to this stream.</p> <p>l. LOD has been modified to eliminate impacts to this stream.</p> <p>m. LOD has been reduced to 75' to minimize impacts to W-T32-4001.</p> <p>n. The pipeline route was shifted east to avoid this wetland entirely.</p>
--	--	--

	<ul style="list-style-type: none"> x. Impact Map 24-1600-70-20-A/41.92-01, Wetland W-T13-4002 - could be minimized by relocating the pipeline to the east. y. Impact Map 24-1600-70-09-A/41.93-01, Stream WW-T13-4003 - could be minimized by relocating the pipeline to the east. z. Impact Map 24-1600-70-09-A/42.03-01, Stream WW-T33-4001 - It appears that impacts to could be minimized by reducing the LOD from the center of the pipeline, as is shown to be possible for other resource crossings. Revise the plan to minimize the impact or provide justification for why the LOD cannot be revised in this location. aa. Impact Map 24-1600-70-09-A/42.03-01, Stream WW-T33-4001 - It appears that the impacts could be minimized by relocating the pipeline to the east. Revise the plan to minimize the impact or provide justification for why the pipeline cannot be relocated in this area. bb. Impact Map 24-1600-70-20-A/42.04-01, Wetland W-T43-4001 - could be avoided by relocating the pipeline to the southwest. cc. Impact Map 24-1600-70-09-A/M-0183-1.32-01, Stream W-T43-5003 - could be minimized by reducing the LOD from the center of the pipeline. dd. Impact Map 24-1600-70-20-A/M-0183-1.35-01, Wetland W-T43-5004 - could be avoided by relocating the pipeline to the east or west. ee. Impact Map 24-1600-70-20-A/M-0183-1.35-01, Wetland W-T43-5004 - could be minimized by reducing the LOO from the center of the pipeline to less than 55 feet. ff. Impact Map Impact 24-1600-70-20-A/M-0183-1.55-01, Wetland W-T43-5003 – It appears that the impacts could be avoided by relocating the pipeline to the north. gg. Impact Map Impact 24-1600-70-20-A/M-0183-1.55-01, Wetland W-T43-5003 - It appears that the impacts could be minimized by reducing the LOO from the center of the pipeline to less than 65 feet, as is shown to be possible for other resource crossings. hh. Impact Map 24-1600-70-09-A/M-0183-1.60-01, Stream WW-T43-5001A - impacts to the floodway could be minimized by relocating the pipeline to the north. 	<ul style="list-style-type: none"> o. LOD has been modified to eliminate impacts to this stream. p. LOD has been reduced to 90' to minimize impacts to WW-T13-4002 and WW-T13-4002A. q. Shifting the pipeline west to avoid this stream was not implemented as this would result in impacting several forested wetlands, including W-T13-4001, an emergent wetland (W-T13-4001), and a cabin. r. LOD has been reduced to 90' to minimize impacts to WW-T13-4005 and avoid impacting the floodway of WW-T13-4005A. s. Shifting the pipeline east to avoid this stream was not implemented as this would result in impacts to a forested wetland complex and additional drainages associated with wetland W-T13-4004. t. LOD has been modified to eliminate impacts to this wetland. u. LOD has been modified to eliminate impacts to this wetland. v. LOD has been modified to eliminate impacts to this wetland. w. LOD has been reduced to 90' to minimize impacts to WW-T13-4004. x. Shifting the pipeline east would require crossing steeper side slopes and was therefore not implemented.
--	--	---

	<ul style="list-style-type: none"> ii. Impact Map 24-1600-70-09-A/M-0183-1.67-01, Wetland W-T43-5001 - could be avoided by relocating access road to the east. jj. Impact Map 24-1600-70-09-A/47.18-01, Stream WW-T14-5001 - impacts to the floodway could be minimized by relocating the pipeline to the southeast. kk. Impact Map 24-1600-70-20-A/47.87-01 Wetland W-T14-5002 - could be minimized by reducing the LOO from the center of the pipeline. ll. Impact Map 24-1600-70-20-A/47.87-01 Wetland W-T14-5002 - It appears that impacts could be avoided by relocating the pipeline to the west. mm. Impact Map 24-1600-70-09-A/47.87-01 Stream WW-T14-5002 - It appears that the impacts could be minimized by reducing the LOD from the center of the pipeline, as is shown to be possible for other resource crossings. Revise the plan to minimize the impact or provide justification for why the LOD cannot be revised in this location. nn. Impact Map 24-1600-70-09-A/47.87-01 Stream WW-T14-5002 - It appears that impacts could be avoided by relocating the pipeline to the west. Revise the plan to minimize the impact or provide justification for why the pipeline alignment cannot be revised in this location. oo. Impact Map 24-1600-70-20-A/48.14-01, Wetland W-T14-5003 - could be minimized or avoided by relocating the pipeline to the east. pp. Impact Map 24-1600-70-09-A/48.14-01, Stream WW-T14-5003 - impacts could be minimized by reducing the LOD from the center of the pipeline. qq. Impact Map 24-1600-70-09-A/48.55-01, Stream WW-T14-5004 - could be minimized by reducing the LOD from the center of the pipeline. rr. Impact Map 24-1600-70-20-A/48.77-01, Wetland W-T14-5005A - impacts to the northeastern portion of wetland impacts could be minimized by reducing the LOD from the center of the pipeline. ss. Impact Map 24-1600-70-09-A/49.30-01, Stream WW-T14-5006 - could be minimized by reducing the LOD from the center of the pipeline, as is shown to be possible for other resource crossings. 	<ul style="list-style-type: none"> y. LOD has been reduced to 90' to minimize impacts to WW-T13-4003. z. LOD has been reduced to 90' to minimize impacts to WW-T13-4001. aa. Shifting the pipeline southwest to minimize impacts to this stream was not implemented as this would require construction on steeper side slopes and in order to avoid future conflicts with a barn being constructed by the landowner. bb. Shifting the pipeline southwest to avoid this wetland was not implemented as this would require construction on steeper side slopes and in order to avoid future conflicts with a barn being constructed by the landowner. cc. LOD has been reduced to 90' to minimize impacts to WW-T43-5003. dd. Shifting the pipeline west to avoid this wetland was not implemented as this would require construction directly through a braided portion of the adjacent stream WW-T43-5003. The wetland continues well beyond the eastern limits of the routing corridor, so shifting the pipeline east to avoid the wetland was not feasible. ee. LOD has been reduced to 75' to minimize impacts to W-T43-5004 (LOD is less than 55 feet on both sides of the pipeline). ff. Shifting the pipeline north to avoid this wetland was not implemented as this would impact an existing waterline and adjacent
--	--	---

	<p>tt. Impact Map 24-1600-70-09-A/49.30-01, Stream WW-T14-5006A - could be avoided by relocating the pipeline to the southeast.</p> <p>uu. Impact Map 24-1600-70-20-A/50.06-01, Wetland W-T14-5008A, - could be minimized by reducing the LOD from the center of the pipeline to less than 55 feet.</p> <p>vv. Impact Map 24-1600-70-20-A/50.06-01, Wetland W-T14-5008A, - It appears that the impacts could be minimized by relocating the pipeline to the northeast.</p> <p>ww. Impact Map 24-1600-70-09-A/50.06-01, Stream WW-T14-5007 - could be minimized by reducing the LOD from the center of the pipeline to less than 55 feet.</p> <p>xx. Impact Map 24-1600-70-09-A/50.53-01, Stream WW-T99-5008A and Stream WW-T14-5008 - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>yy. Impact Map 24-1600-70-09-A/50.53-01, Stream WW-T99-5008A and Stream WW-T14-5008 - impacts to one of the streams could be minimized by relocating the pipeline to the southwest.</p> <p>zz. Impact Map 24-1600-70-20-A/50.53-01, Wetland W-T14-5010 - could be minimized by further reducing the northeastern LOD limit.</p> <p>aaa. Impact Map 24-1600-70-20-A/50.53-01, Wetland W-T14-5010 - could be minimized by relocating the pipeline to the southwest.</p> <p>bbb. Impact Map 24-1600-70-09-A/51.21-01, Stream WW-T14-5009A - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>ccc. Impact Map 24-1600-70-020-A/M-0165-0.47-01, Wetland W-T32-5001, - could be avoided by relocating the pipeline to the southeast.</p> <p>ddd. Impact Map 24-1600-70-09-A/M-0165-0.48-01, Stream WW-T44-5001, - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>eee. Impact Map 24-1600-70-20-A/52.65-01, Wetland W-T14-5014 - It appears that the impacts could be minimized by reducing the LOD from the center of the pipeline, as is shown to be possible for other resource crossings. Revise the plan to minimize the impact or provide justification for why the LOD cannot be revised in this location.</p>	<p>residences. In addition, shifting the pipeline north would impact wetland W-T43-5003-1.</p> <p>gg. This wetland encroaches within the southern portion of the LOD only, and this portion of the LOD was reduced by 25' to minimize impacts to W-T43-5003 (LOD is less than 65 feet on both sides of the pipeline).</p> <p>hh. Shifting the pipeline north to minimize this floodway impact was not implemented as this would impact an existing residential structure and waterline.</p> <p>ii. Access Road has been eliminated and no longer impacts wetland W-T43-5001.</p> <p>jj. Shifting the pipeline southeast to minimize floodway impacts was not implemented as this would require construction on steeper side slopes.</p> <p>kk. This wetland encroaches within the eastern portion of the LOD only. Reduction of this portion of the LOD was not possible due to workspace needed for the adjacent road crossing and steep topography immediately north of the crossing.</p> <p>ll. Shifting the pipeline west to avoid this wetland was not implemented as this would impact an existing residential structure.</p> <p>mm. The pipeline route was shifted slightly to avoid impacting this stream.</p> <p>nn. The pipeline route was shifted slightly to avoid impacting this stream.</p>
--	---	---

	<p>fff. Impact Map 24-1600-70-20-A/52.65-01, Wetland W-T14-5014 - could be avoided by relocating the pipeline to the west.</p> <p>ggg. Impact Map 24-1600-70-09-A/52.65-01, Stream WW-T14-5010, - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>hhh. Impact Map 24-1600-70-09-A/52.77-01, Stream WW-T14-5011 and Stream WW-T14-5011A - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>iii. Impact Map 24-1600-70-09-A/52.77-01, Stream WW-T14-5011 and Stream WW-T14-5011A - could be avoided by relocating the pipeline to the west.</p> <p>jjj. Impact Map 24-1600-70-09-A/53.04-01, Stream WW-T14-5013 and Stream WW-T14-5013A, - could be avoided by relocating the pipeline to the west.</p> <p>kkk. Impact Map 24-1600-70-09-A/53.68-01, Sheet 1 of 2, Stream WW-T10-6002 - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>lll. Impact Map 24-1600-70-09-A/53.68-01, Sheet 1 of 2, Stream WW-T10-6002 - could be avoided by relocating the pipeline to the northwest.</p> <p>mmm. Impact Map 24-1600-70-09-A/53.68-01, Sheet 2 of 2 Stream WW-T10-6002 impacts to the floodway could be avoided by locating the pipeline further to the northeast.</p> <p>nnn. Impact Map 24-1600-70-20-A/53.75-01, Wetlands W-T10-6003 and W-T10-6003A-1, - could be avoided by locating the pipeline further to the northeast.</p> <p>ooo. Impact Map 24-1600-70-20-A/53.78-01, Wetland W-T10-6003B - could be avoided by locating the pipeline further to the northeast.</p> <p>ppp. Impact Map 24-1600-70-09-A/54.31-01, Stream WW-T46-6004 - could be minimized by further reducing the LOD from the center of the pipeline.</p> <p>qqq. Impact Map 24-1600-70-09-A/M-0168-0.05-01 Stream WW-T40-6003 - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>rrr. Impact Map 24-1600-70-09-A/M-0168-0.05-01 Stream WW-T40-6003 - floodway impacts could be minimized by reducing the LOD from the center of the pipeline.</p>	<p>oo. Shifting the pipeline east to avoid this wetland was not implemented as this would cause parallel impacts to the forested riparian corridor and floodway of a north to south flowing stream in the eastern portion of the routing corridor.</p> <p>pp. LOD has been reduced to 90' to minimize impacts to WW-T14-5003.</p> <p>qq. LOD has been reduced to 90' to minimize impacts to WW-T14-5004.</p> <p>rr. LOD has been reduced to 75' to minimize impacts to W-T14-5005.</p> <p>ss. The full LOD and additional workspace is needed at this crossing due to the size of the crossing and Aid to Navigation (ATON) requirements.</p> <p>tt. Shifting the pipeline southeast to avoid this stream was not implemented as this would result in additional loss of riparian forest buffer along Swatara Creek. Please also note that this stream is an entirely subsurface pipe draining the field and road to the east. This was called a stream at the request of PADEP during site visits due to the possibility that a natural surface channel once existed in the area and has since been buried/channeled underground.</p> <p>uu. LOD has been reduced to 90' to minimize impacts to W-T14-5008A. LOD on the working side (north side) of the pipeline could not be reduced less than 55' due to steep terrain, depth of the excavation, and adjacent stream crossing.</p>
--	---	--

	<p>sss. Impact Map 24-1600-70-20-A/55.48-01, Wetland W-T30-6001 - could be reduced by locating the pipeline further to the southwest.</p> <p>ttt. Impact Map 24-1600-70-09-A/55.68-01, Stream WW-T30-6005 - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>uuu. Impact Map 24-1600-70-20-A/56.84-01, Wetland W-T40-6001, Wetland W-T40-6001 A, and Wetland W-T40-6001C - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>vvv. Impact Map 24-1600-70-09-A/56.89-01, Stream WW-T40-6001A and Stream WW-T40-6001 - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>www. Impact Map 24-1600-70-09-A/56.89-01, Stream WW-T40-6001A and Stream WW-T40-6001 - impacts to one or both of the watercourses could be minimized or avoided by relocating the pipeline to the northeast or to the southwest.</p> <p>xxx. Impact Map 24-1600-70-09-A/58.48-01, Stream WW-T43-6003A and Stream WW-T43-6004 - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>yyy. Impact Map 24-1600-70-09-A/58.48-01, Stream WW-T43-6003A and Wetland W-T43-6002 - It appears that impacts could be minimized or avoided by relocating the pipeline to the southwest. Revise the plan to minimize the impact or provide justification for why the pipeline alignment cannot be revised in this location.</p> <p>zzz. Impact Map 24-1600-70-20-A/58.51-01 Wetland W-T43-6002 - could be avoided by reducing the LOD from the center of the pipeline.</p> <p>aaaa. Impact Map 24-1600-70-20-A/58.51-01 Wetland W-T43-6002 - could be minimized or avoided by relocating the pipeline to the southwest.</p> <p>bbbb. Impact Maps 24-1600-70-20-A/58.72-01, Sheets 1 and 2 Impact Maps 24-1600-70-20-A/58.72-01 Wetland W-T23-6002C-1 - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>cccc. Impact Maps 24-1600-70-20-A/58.72-01 Wetland W-T23-6002A-2 - could be minimized or avoided by relocating the pipeline to the southwest or northeast.</p>	<p>vv. Shifting the pipeline northeast to minimize impacts to this wetland was not implemented as this would impact an additional stream (WW-T14-5007A).</p> <p>ww. LOD has been reduced to 90' to minimize impacts to WW-T14-5007. LOD on the working side (north side) of the pipeline could not be reduced less than 55' due to steep terrain, depth of the excavation, and adjacent wetland crossing.</p> <p>xx. LOD has been reduced to 90' to minimize impacts to WW-T99-5008A, and to 75' to minimize impacts to WW-T14-5008.</p> <p>yy. Both streams continue beyond the eastern limits of the routing corridor, so shifting the pipeline east to avoid the streams was not feasible.</p> <p>zz. LOD has been reduced to 75' to minimize impacts to W-T14-5010-1.</p> <p>aaa. Shifting the pipeline southwest to minimize impacts to this wetland was not implemented as the current alignment is least impactful to the adjacent stream (WW-T14-5008).</p> <p>bbb. LOD has been reduced to 90' to minimize impacts to WW-T14-5009A.</p> <p>ccc. LOD has been modified to eliminate impacts to this wetland.</p> <p>ddd. LOD has been reduced to 90' to minimize impacts to WW-T44-5001.</p>
--	---	--

	<p>dddd. Impact Map 24-1600-70-09-A/58.75-01, Stream WW-T23-6003 - impacts could be minimized by reducing the LOD from the center of the pipeline.</p> <p>eeee. Impact Map 24-1600-70-20-A/59.29-01, Wetland W-T33-6001 - could be avoided by locating the pipeline further to the west.</p> <p>ffff. Impact Map 24-1600-70-09-A/59.32-01, Stream WW-T33-6001 - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>gggg. Impact Map 24-1600-70-09-A/M-0176-010-01, Stream WW-T43-6001 - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>hhhh. Impact Map 24-1600-70-09-A/M-0200-0.27-01 Stream WW-T44-7002, - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>iiii. Impact Map 24-1600-70-20-A/M-0200-0.29-01 Wetland W-T44-7001 - could be reduced by locating the pipeline further to the northwest.</p> <p>jjjj. Impact Map 24-1600-70-09-A/60.65-01 Stream WW-T23-6001 - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>kkkk. Impact Map 24-1600-70-20-A/60.66-01 Wetland W-T23-6001C - could be avoided by locating the pipeline further to the northwest or southeast.</p> <p>llll. Impact Map 24-1600-70-09-A/61.12-01 Stream WW-T23-6002, - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>mmmm. Impact Map 24-1600-70-09-A/61.17-01 Stream WW-T20-7002, - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>nnnn. Impact Map 24-1600-70-20-A/61.17-01 Wetland W-T20-7001, - could be avoided by relocating the pipeline to the northwest or southeast.</p> <p>oooo. Impact Map 24-1600-70-09-A/61.41-01 Stream WW-T20-7001, - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>pppp. Impact Map 24-1600-70-09-A/63.69-01 Stream WW-T10-7003, - could be minimized by reducing the LOD from the center of the pipeline.</p>	<p>eee. This wetland encroaches within the eastern portion of the LOD only, and this portion of the LOD was reduced by 10' to minimize impacts to W-T14-5014.</p> <p>fff. Shifting the pipeline west to avoid this wetland was not implemented as this would require construction on steeper side slopes and clearing of riparian forest buffer associated with the adjacent stream (WW-T14-5010).</p> <p>ggg. LOD has been reduced to 90 ft. to minimize impacts to stream WW-T14-5010.</p> <p>hhh. LOD has been reduced to 90' to minimize impacts to WW-T14-5011 and WW-T14-5011A.</p> <p>iii. Shifting the pipeline west to avoid stream WW-T14-5011A was not implemented as this would require additional clearing of riparian forest buffer along stream WW-T14-5011. Stream WW-T14-5011 extends beyond the routing corridor to the west, so a westward shift to avoid this crossing is not feasible.</p> <p>jjj. Stream WW-T14-5013 continues beyond the western limits of the routing corridor, so shifting the pipeline west to avoid this stream was not feasible. Shifting the pipeline west to avoid stream WW-T14-5013A was not implemented as this would impact additional riparian forest buffer around stream WW-T14-5013.</p> <p>kkk. LOD has been reduced to 90' to minimize impacts to WW-T10-6002.</p>
--	--	--

	<p>qqqq. Impact Map 24-1600-70-09-A/63.93-01 Stream WW-T10-7002, - could be minimized by reducing the LOD from the center of the pipeline.</p> <p>rrrr. Impact Map 24-1600-70-09-A/64.07-01 Stream WW-T10-7001, - could be minimized by reducing the LOD from the center of the pipeline.</p>	<p>lll. Shifting the pipeline northwest to avoid this stream was not implemented as this would impact a residential area.</p> <p>mmm. Shifting the pipeline northeast to avoid this floodway was not implemented as this would impact a residence.</p> <p>nnn. Shifting the pipeline northeast to avoid this wetland was not implemented as this would impact a residence.</p> <p>ooo. Shifting the pipeline northeast to avoid this wetland was not implemented as this would impact a residence.</p> <p>ppp. LOD has been reduced to 90' to minimize impacts to WW-T40-6004.</p> <p>qqq. LOD has been reduced to 90' to minimize impacts to WW-T40-6003.</p> <p>rrr. LOD has been reduced to 90' to minimize impacts to the floodway of WW-T40-6003.</p> <p>sss. Shifting the pipeline northwest to minimize impacts to this wetland was not implemented as this would impact meandering and/or braided portions of adjacent stream WW-T30-6004 immediately east and west of the LOD.</p> <p>ttt. LOD has been reduced to 90' to minimize impacts to WW-T30-6005.</p> <p>uuu. LOD reduced to 90' to minimize impacts to W-T10-6002.</p>
--	---	---

		<p>vvv. LOD has been reduced to 90' to minimize impacts to WW-T40-6001 and WW-T40-6001A.</p> <p>www. Shifting the pipeline northeast to avoid these streams was not implemented as this would impact residences. Shifting the pipeline southwest to avoid these streams was not implemented as stream WW-T40-6001 would still need be crossed as it extends well beyond the routing corridor. In addition, a southwest shift of the alignment would result in greater impacts to wetland W-T40-6001.</p> <p>xxx. LOD has been reduced to 90' to minimize impacts to WW-T43-6003A and WW-T43-6004.</p> <p>yyy. LOD has been modified to eliminate impacts to wetland W-T43-6002. The route was not shifted southwest to avoid stream WW-T43-6003A as the current route is on the east side of an existing foreign pipeline, per landowner request.</p> <p>zzz. LOD has been modified to eliminate impacts to this wetland.</p> <p>aaaa. LOD has been modified to eliminate impacts to this wetland.</p> <p>bbbb. LOD has been reduced to 75' to minimize impacts to W-T23-6002C.</p> <p>cccc. Shifting the pipeline southwest or northeast to avoid this wetland was not implemented as the current alignment follows an existing pipeline, thereby minimizing tree clearing and other impacts in the surrounding area.</p>
--	--	--

		<p>dddd. LOD has been reduced to 90' to minimize impacts to WW-T23-6003.</p> <p>eeee. Shifting the pipeline west to avoid this wetland was not implemented as this would impact residential structures.</p> <p>fff. LOD has been reduced to 90' to minimize impacts to WW-T33-6001.</p> <p>gggg. LOD has been reduced to 90' to minimize impacts to WW-T43-6001.</p> <p>hhhh. LOD has been reduced to 90' to minimize impacts to WW-T44-7002.</p> <p>iiii. Shifting the pipeline northwest to avoid this wetland was not implemented as this would require construction on steeper side slopes and impact an additional stream in the northern portion of the routing corridor.</p> <p>jjjj. LOD has been reduced to 90' to minimize impacts to WW-T23-6001.</p> <p>kkkk. Shifting the pipeline northwest to avoid this wetland was not implemented as this would require construction on steep side slopes.</p> <p>llll. LOD has been reduced to 90' to minimize impacts to WW-T23-6002.</p> <p>mmmm. LOD has been reduced to 75' to minimize impacts to WW-T20-7002.</p> <p>nnnn. Shifting the pipeline southeast to avoid this wetland was not implemented as this would require construction across multiple</p>
--	--	--

Technical Deficiency Number	Technical Deficiency Description	Response
		<p>ponds. Shifting the pipeline northwest was not implemented as this would require construction through a meandering portion of stream WW-T23-6002, as well as result in additional clearing of riparian forest buffer along this stream.</p> <p>oooo. LOD has been reduced to 90' to minimize impacts to WW-T20-7001.</p> <p>pppp. LOD has been reduced to 90' to minimize impacts to WW-T10-7003.</p> <p>qqqq. LOD has been reduced to 90' to minimize impacts to WW-T10-7002.</p> <p>rrrr. LOD has been reduced to 90' to minimize impacts to WW-T10-7001.</p>

<p>28</p>	<p>The following wetland crossings do not appear that the pipeline is crossing at the narrowest point through the wetland. Revise the plan to minimize the impact or provide justification for why the pipeline alignment cannot be revised in this location. [25 PA Code §105.13(e)(1)(viii)] [25 PA Code §105.18a]</p> <ul style="list-style-type: none"> a. Wetland W-T13-6002, Impact Map 24-1600-70-20-A/53.46-01. b. Wetland W-T10-6004, Impact Map 24-1600-70-20-A/53.58-01. c. Wetland W-T10-6002A and Wetland W-T10-6002C, Impact Map 24-1600-70-20- A/54.29-01. d. Wetland W-T30-6003, Impact Map 24-1600-70-20-A/55.92-01. e. Wetland W-T40-6001, Wetland W-T40-6001 A, and Wetland W-T40-6001C, Impact Map 24-1600-70-20-A/56.84-01. f. Wetland W-T23-6002C, Impact Maps 24-1600-70-20-A/58.72-01, Sheets 1 and 2. 	<ul style="list-style-type: none"> a. Shifting the pipeline further west to cross in a narrower location was not feasible without either impacting a residence to the southwest, or placing a PI in the wetland, resulting in a wider LOD. Shifting the pipeline further east would impact a wider portion of the wetland. b. Shifting the pipeline west to cross in a slightly narrower location was not feasible without placing one or more PI's in nearby wetlands and increasing impacts. Shifting the pipeline further east would impact a wider portion of the wetland. c. The wetland only narrows slightly east of the proposed crossing. Shifting the route further east into the slightly narrower area was not implemented as this would increase clearing of riparian forest buffer around stream WW-T40-6004. Shifting the pipeline further west would impact a wider portion of the wetland. d. Shifting the pipeline to cross in a slightly narrower location was not feasible as the proposed alignment is required to avoid impacting residences and residential structures north and south of the route. e. The pipeline was routed in this location to utilize an old roadbed within the wetland to limit forested wetland impacts as much as possible. Shifting the pipeline east to cross in a slightly narrower location would impact residences. Shifting the pipeline further west would not impact a narrower portion of the wetland. f. The pipeline was routed in this location to collocate with an existing foreign pipeline. Shifting the pipeline east to cross in a slightly narrower location would impact residences. Shifting the pipeline further
-----------	--	--

Technical Deficiency Number	Technical Deficiency Description	Response
		west would impact a wider portion of the wetland.
29	Construction areas CS-CSA-LE-2-010 and CS-CY-LE-2-08 as well as the full extent of Access Road AR-LE-040, shown on the Impact Maps 24-1600-70-14-A/36.51-01 and 24-1600-70-20-A/M-0183-1.67-01 are not shown within the E&S Control Plan set. Clarify the discrepancy and revise the plans as appropriate. <i>[25 PA Code §105.13(e)(1)(i)(g)]</i>	<p>The revised Application addresses the inconsistencies.</p> <p>CS-CY-LE-2-08 is no longer a part of the Project.</p> <p>CS-CSA-LE-2-010 is no longer a part of the Project.</p> <p>Access Road AR-LE-040 is a part of the Project and is included in the Chapter 105 TOPO location map.</p>
30	Impact Map 24-1600-70-09-A/AR-LE-033.1-01, Sheets 1 and 2 – It is unclear how the typical Bridge Equipment Crossing (BEC) will be effectively utilized for the floodway crossing. Will just the matting be placed at grade? Provide additional details, if necessary, to clearly show the intended installation for the stabilized equipment crossing. <i>[25 PA Code §105.13(e)(1)(i)(g)]</i>	The revised Application includes an updated typical Bridge Equipment Crossing (BMPs and Quantities Plan Set within Attachment M – provided under separate cover) to clarify intended installation for the stabilized equipment crossing.
31	Access Road AR-LE-041 on Impact Map 24-1600-70-14-A/36.51-01 is not shown within the ES plan set. Clarify the discrepancy and revise the plans as appropriate. <i>[25 PA Code §105.13(e)(1)(i)(g)]</i>	Access Road AR-LE-041 has been removed from the Project.
32	Verify if the Access Road AR-LE-52, as is shown on ES Plan Drawing 24-1600-70-28- A/LL113_9-AR-LE-052 crosses a regulated resource between stations 25+00 and 26+00. If the crossing is over a regulated resource, provide a detailed impact table for the resource crossing identifying all the impacts associated with this crossing. Revise all other application documents to reflect any additional impacts. <i>[25 PA Code §105.13(e)(1)(x)]</i>	The Chapter 105 impact tables (Attachment E-2) are revised to include the requested information in the revised Application submittal, and include only bold, italicized text for those entries that have either changed or have been added and strikethrough text for those resources that have been eliminated. Other application documents are revised, as appropriate.

Technical Deficiency Number	Technical Deficiency Description	Response
33	Provide a location on the Topographical Project Location Key Map, Drawing Number 24-1600-70-14-A/36.51-01 for the Access Road AR-LE-057.1 shown in the ES Plan Drawing 24-1600-70-28-A/LL113_9-AR-LE-057.1. <i>[25 PA Code §105.13(e)(1)(i)(c)]</i>	A Topographical Project Location Key Map is included with the revised Application. The ES plan set is revised to include AR-LE-057.1, and is included within Attachment H-2 of the revised Application.
34	Verify if Access Road AR-LE-060 crosses a regulated resource between stations 5+00 and 6+00, as is shown on the ES Plan Drawing 24-1600-70-28-A/LL113_9-AR-LE-060. If the crossing is over a regulated resource, provide a detailed impact table for the resource crossing identifying all the impacts associated with this crossing. Revise all other application documents to reflect any additional impacts. <i>[25 PA Code §105.13(e)(1)(x)]</i>	The Chapter 105 impact tables (Attachment E-2) are revised to include the requested information in the revised Application, and include only bold, italicized text for those entries that have either changed or have been added and strikethrough text for those resources that have been eliminated. Other application documents are revised, as appropriate.
35	ES Plan Drawing 24-1600-70-28-A/LL113_9, Sheet 4 of 28 identifies a remote sensed stream - WW-RS-T53-4001, when the surrounding wetland - W-T32-4001- appears to have been field verified. Clarify this discrepancy. <i>[25 PA Code §105.21(a)(1)]</i>	The E&S plan set (Attachment M) is revised to clarify the status of the referenced stream and wetland, and is also included within Attachment H-2 of the revised Application.
36	<p>The following deficiencies relate to ES Plan Drawing 24-1600-70-28-A/LL113_9, Sheet 5 of 28. <i>[25 PA Code §§ 105.13(e)(1)(viii)] & 05.13(e)(1)(x)]</i></p> <ul style="list-style-type: none"> a. Clarify if the feature shown at station 2178+00 is a regulated stream or wetland. If the crossing is over a regulated resource, provide a detailed impact table for the resource crossing identifying all the impacts associated with this crossing. Revise all other application documents to reflect any additional impacts. b. It appears that temporary construction ROW will encroach upon the floodway Stream WW-T13-4005A. Revise the Chapter 105 application to include these impacts and explain why the impacts are necessary. 	<p>The revised Application submittal includes:</p> <ul style="list-style-type: none"> a. Clarification in the E&S plan set (Attachment M) on the feature shown at station 2178+00; and b. Clarification of impacts associated with floodway Stream WW-T113-4005A.

Technical Deficiency Number	Technical Deficiency Description	Response
37	Provide a detailed impact map for the crossing of Gingrich Run, shown on ES Plan Drawing 24-1600-70-28-A/LL113_9, Sheet 6 of 28, Station 2248+00 (approximate) identifying all the impacts associated with this crossing. Revise all other application documents to reflect any additional impacts. [25 PA Code §105.13(e)(1)(x)]	Detailed impact maps for the crossing of Gingrich Run are included in the revised Application. The other impact drawings (Attachment H-2) are revised to include additional information, as requested.
38	Provide a description and other pertinent information for the "Unregulated Drainage Features" shown at the following locations within the ES Plan Drawing 24-1600-70-28-A/LL113_9. Include sufficient information for the DEP to evaluate if the features are indeed unregulated. [25 PA Code §105.13(e)(1)(x)] a. Sheet 9 of 28 between Stations 20+00 and 25+00 b. Sheet 16 of 28 between Stations 2705+00 and 2722+00 c. Sheet 20 of 28 between Stations 2905+00 and 2910+00	The revised Application submittal provides additional information to support PA DEP's evaluation of the regulatory status of the indicated streams.
39	ES Plan Drawing 24-1600-70-28-A/LL113_9 Sheet 15 of 28- It appears that the temporary construction ROW will encroach upon the floodways of Streams WW-T14-5007A and WW-T14-5007B. Revise the Chapter 105 application to include this impact and explain why the impact is necessary. [25 PA Code §105.21(a)(1)]	The temporary construction ROW will not encroach upon the floodways of Streams WW-T14-5007A and WW-T14-5007B.
40	ES Plan Drawing 24-1600-70-28-A/LL113_9 Sheet 20 of 28 - It appears that the temporary construction ROW will encroach upon the floodway Streams WW-T30-6004A and WW-T30-6004B. Revise the Chapter 105 application to include these impacts. [25 PA Code §105.21(a)(1)]	Floodway impacts for streams WW-T30-6004A and WW-T30-6004B are included and depicted within the temporary floodway impact calculations for stream crossing WW-T30-6004.
41	ES Plan Drawing 24-1600-70-28-A/LL113_9 Sheet 23 of 28 - It appears that the temporary construction ROW will encroach upon the floodway Stream WW-T43-6003B. Revise the Chapter 105 application to include this impact. [25 PA Code §105.21(a)(1)]	Floodway impacts for stream WW-T43-6003B are included and depicted within the temporary floodway impact calculations for stream crossing WW-T43-6003A.
42	It appears there are regulated waters located on the Contractor Staging Area CS-CSA-LE-2-010. Provide an additional site description and analysis verifying that regulated waters will not be impacted by this activity. [25 PA Code §105.13(e)(1)(x)]	This Contractor Staging Area CS-CSA-LE-2-010 has been removed from the Project.

Technical Deficiency Number	Technical Deficiency Description	Response
43	Several different equipment crossing details are provided in the E&S Control Plans. Revise the ES plans to identify where each type of crossing will be utilized. [25 PA Code §105.13(e)(1)(i)]	The revised Application includes revised drawings providing where each crossing method will be used (see Attachment H-2).
44	Impact Drawings - Clarify what Existing TGPL R/W stands for as is shown in the Legend. [25 PA Code §105.13(e)(1)]	The revised Application clarifies that “TGPL R/W” stands for “Transcontinental Gas Pipe Line right-of-way” (see Attachment H-2).
45	Impact Map 24-1600-70-09-A/37.2-01, Stream WW-T30-4003 - The stream length shown is inconsistent with the "Impact Table for Individual Permit Application". Clarify the discrepancy and revise the applicable document as necessary. [25 PA Code §§105.13(e)(1)(viii) & 105.13(e)(1)(x)]	The drawing has been revised to match the “Impact Table for Individual Permit Application”.
46	<p>The following deficiencies relate to Stream WW-T43-4001, Impact Map 24-1600-70-09-A/39.25-01 [25 PA Code §§105.13(e)(1)(viii), 105.314, & 105.13(e)(1)(x)]</p> <ul style="list-style-type: none"> a. Stream length shown is inconsistent with the "Impact Table for Individual Permit Application". Clarify the discrepancy and revise the applicable document as necessary. b. Pipelines along streams shall be located a sufficient distance away from the bank to prevent damage to the bank as a result of erosion; pipelines shall be located a minimum of 25 feet away from the streambank unless other erosion protection measures are provided. Provide an analysis demonstrating that the installation of the pipeline within 25 feet along the stream will not decrease the stability of the bank. c. Stream WW-T43-4001 - The permanent impacts were removed from the "Impact Table for Individual Permit Application"; however, the Impact Map sheet was not provided showing the revised alignment and the reduced impacts. Provide the revised plan. 	<p>The revised Application submittal:</p> <ul style="list-style-type: none"> a. The stream length shown is consistent with the "Impact Table for Individual Permit Application" b. The Proposed Pipeline is 55 feet from the streambank which exceeds the minimum 25 feet requirement. c. A revised impact map sheet has been provided, temporary and/or permanent impacts to stream WW-T43-4001 has been eliminated (see revised Attachment H-2 drawing 24-1600-70-09-A/M-0300-0.04-01).

Technical Deficiency Number	Technical Deficiency Description	Response
47	On Impact Map 24-1600-70-09-A/41.13-01, pipelines along streams shall be located a sufficient distance away from the bank to prevent damage to the bank as a result of erosion; pipelines shall be located a minimum of 25 feet away from the streambank unless other erosion protection measures are provided. Provide an analysis demonstrating that the installation of the pipeline within 25 feet along the stream will not decrease the stability of the bank. [25 PA Code §§105.13(e)(1)(viii), 105.314]	The pipeline route was shifted roughly 300' to the east between MP 40.2 and 41.5 during field routing to avoid several forested wetlands, including W-T13-4001, an emergent wetland (W-T13-4001), and a cabin. Avoidance of these features requires the crossing of stream WW-T13-4005 along the proposed alignment. In locations such as this where the Project is paralleling a stream bank, within 25 feet of centerline, Transco will install protective measures, including, matting 5-feet outside, and along, the existing stream banks and additional matting to bridge over the stream, to avoid any impact to the existing stream bank. Additionally, the entire stream and banks on the working side will be bridged over (covered) with matting. Soil Erosion & Sediment control measures will be installed upon clean up to prevent erosion of the bank of stream WW-T13-4005.
48	On Impact Map 24-1600-70-09-A/53.68-01, Sheet 2 of 2, clarify if the "existing well" is a public or private water supply. [25 PA Code §105.14(b)(5)]	The well identified in map 24-1600-70-09-A/53.68-01 is a private well.
49	On Impact Map 24-1600-70-20-A/56.84-01, Stream WW-T40-6001 - The impacts could be reduced by crossing the stream at a right angle. Revise the plan accordingly or provide justification for why the pipeline alignment cannot be revised in this location. [25 PA Code §§105.13(e)(1)(vii)]	The pipeline was relocated to cross Stream WW-T40-6001 at a right angle to reduce impacts (see Impact Map 24-1600-70-09-A/56.89-01 sheet 2 of 2).
50	Stream WW-T20-7003 Impact Map 24-1600-70-09-A/61.98-01 - Explain why the watercourse delineation is open-ended and the plan sheet states that the pipeline does not cross the proposed pipeline when topographic contours appear to indicate otherwise. [25 PA Code §105.21(a)(1)]	Stream WW-T20-7003 was extended during field surveys and does in fact cross the proposed pipeline. The revised Application has been updated accordingly.

Technical Deficiency Number	Technical Deficiency Description	Response
51	The stream and wetland boundaries on several impact sheets overlap. Provide revised plan sheets with the wetland and stream boundaries clearly delineated. [25 PA Code §105.13(e)(1)(i)(A)]	The revised Application (Attachment H-2) includes drawings that do not have overlapping resource area boundaries. The revised Chapter 105 impact maps have been revised to include a heavier line type to show the interface between differing wetland classifications.
52	Provide a typical plan showing the crossing layout. The DEP finds it unclear where the dam and pump by-pass will be located in relation to the BEC and where the BEC will be located in relation to the pipeline. [25 PA Code §105.13 (e)(1)(i)(C)]	The BMPs and Quantities Plan Set within the revised Application (Attachment M) includes a revised dam and pump typical detail (DPX) showing the BEC with respect to the pipeline and the dam and pump by-pass.
53	Provide specific sizing for the BEC pipes, for each resource crossing, which will meet the specification provided on Sheet 24-1600-70-26-A/BEC-01, Note 8. Ensure to provide sufficient documentation supporting the size specification. [25 PA Code §105.13(e)(1)(i)(C)]	Transco has revised the BMPs and Quantities Plan Set within the revised Application (Attachment M) to no longer utilize BEC with culverts.
54	Provide documentation the BEC pipes, for each resource crossing are sized so that the normal flow depth in the pipes is less than half the diameter of the pipes. [25 PA Code §105.13(g)]	Transco has revised the BMPs and Quantities Plan Set within the revised Application (Attachment M) to no longer utilize BEC with culverts.
55	As is shown on ES Plan Drawing 24-1600-70-28A/LL113 _9, Sheet 21 of 28, a permanent access road will be installed in Wetlands W-T40-6001, W-T40-6001A, and W-T40-6001C. However, no mention of a permanent roadway in wetlands could be found in the Environmental Assessment. Revised Enclosures C and D of the Environmental Assessment to identify the crossing and discuss the potential long-term impacts to each wetland. [25 PA Code §105.21(a)(1)]	Wetlands W-T40-6001, W-T40-6001A, and W-T40-6001C are located on the north side of Fort Swatara Drive. The permanent access road, AR-LE-050.1.1, is located on the south side Fort Swatara Drive. The permanent access road is not proposed to be installed within the wetlands. The leader for the access road callout points to the access road connection to the southern edge of Fort Swatara Drive.

Technical Deficiency Number	Technical Deficiency Description	Response
56	Identify the principal function(s) of wetlands W-T14-5016 and W-T33-6001. <i>[25 PA Code 105.13(e)(2)]</i>	Wetland W-T14-5016 is not a feature, it is not included in the revised Application. A complete functions and values form is provided for Wetland WT-33-6001 in the revised Application (Lebanon County Delineation Report, Attachment L-2).
57	<p>According to the application, wetlands W-T32-6001 and W-T23-6002 contain critical habitat for a state or federally listed threatened or endangered species.</p> <p>a. As such, they are considered exceptional value. Provide revised copies of all appropriate sections of the application. <i>[25 PA Code §105.17(1)(i)]</i></p> <p>b. Explain why Table L-4(c)-1 in Enclosure C of the Environmental Assessment indicates that there are no wetlands in Lebanon County that provide Threatened or Endangered Species Habitat. <i>[25 PA Code §105.21 (a)(1)]</i></p>	Wetland WT-32-6001 was determined to not contain suitable bog turtle habitat, and no other threatened or endangered plant or animal species were identified in this wetland during field surveys. Wetland WT-23-6002 was identified as potentially suitable bog turtle habitat. However, no bog turtles were identified in this wetland during Phase 2 and 3 surveys. No other threatened or endangered plant or animal species were identified in this wetland during field surveys. Therefore, these wetlands are not considered exceptional value due to presence of habitat for threatened or endangered species. Please note that Wetland W-T23-6002 is considered an exceptional value because it is in the floodplain of Watercourse WW-T23-6003, an approved trout water/trout stocked stream and wild trout stream.
58	The functions and values data sheets are not completed in their entirety. Provide completed data sheets. <i>[25 PA Code §105.21 (a)(1)]</i>	Completed functions and values forms are provided within the revised wetland delineation report, which is included as Attachment L-2 of the Application.

Technical Deficiency Number	Technical Deficiency Description	Response
59	<p>Revise Enclosure D of the Environmental Assessment to explain, on an individual crossing and cumulative basis, why open cut pipe installation combined with permanent ROW maintenance will not result in an adverse impact to exceptional value wetlands or a significant adverse impact to other wetlands. The analysis should include a discussion of potential temporary or permanent impacts to hydrology as a result of the open cut, as well as a loss of woody species in forested/scrub shrub areas. Provide a plan to minimize the risk of permanent impacts to wetland hydrology for each wetland where an impact may occur. <i>[25 PA Code §105.13(e)(1)(ix) & 105.18a]</i></p>	<p>The Alternatives Analysis (Attachment P-1 of the revised Application) has been revised to include an analysis of applicable crossing techniques and their feasibility for application within this Project. The Comprehensive Environmental Evaluation for the Central Penn Line provided in Attachment L-5, Appendix L-1 includes a summary of cumulative impacts for the Project as whole.</p> <p>Maintenance within PSS and PFO wetlands is described within Section D of Attachment L-5, and Attachment 18 of the ECP (Attachment M of the revised Application). Enclosure D of Attachment L-5 provides a discussion as to the use of these maintained corridors for visual inspection of Project facilities to ensure safe operation and maintenance. A Riparian Area Impact Assessment and Restoration Plan is included within the revised Application (Attachment L-5, Appendix L-3) as discussed within the response to Technical Deficiency 10. Revised PRM Plans are included as Attachment Q-2 within the revised Application, which details the compensatory mitigation for PSS and PFO impacts.</p> <p>Section B1 of Enclosure D within Attachment L-5 discusses the measures utilized during construction and installation to minimize the risk of permanent impacts to wetland hydrology, which is also discussed within the Transco Procedures in Attachment 18 of the ECP (Attachment M).</p>

<p>60</p>	<p>As discussed in the April 28, 2014 response letter from the U.S. Fish & Wildlife Service, annual ryegrass is discouraged due to its tendency to compete with native species. Revise all applicable sections of the application to propose alternative to annual ryegrass, such as cereal oats or grain rye. <i>[25 PA Code §105.13(e)(1)(ix)]</i></p>	<p>For the pipeline construction ROW and ancillary facilities, Transco proposes to utilize either winter wheat or annual ryegrass as a nurse crop on the ROW from January 1 through May 15 and August 15 through December 31. During the summer months (May 15 through August 15), it is recommended that browntop millet be utilized as the nurse crop. The use of cereal (winter) rye is highly discouraged due to the allopathic effects it could have on the establishment of the permanent crop. It is recommended that annual rye be planted at a nurse rate of 4 pounds per acre and winter wheat at a rate of 10 pounds per acre, individually. Browntop millet should be seeded at a rate of 5 pounds per acre. The seed mixes proposed for the Project are included within the BMPs and Quantities Plan Set, included within Attachment M of the revised Application.</p> <p>Within the PRM sites, the use of annual ryegrass is proposed as a cover crop will be at a rate of no more than 6 to 10 pounds per acre. Transco acknowledges that the recommended industry seeding rate of 60 pounds per acre is excessive and can lead to competition with native species; however, at one sixth the recommended rate, the risk of reseeding issues and potential problems with Variety Not Specified mixes becomes significantly lowered.</p> <p>As such, Transco maintains annual ryegrass to be an acceptable cover crop at the lower 6 to 10 pounds per acre rate of application. This species develops a substantial root system that not only stabilizes soil quickly, but also allows for compaction to be broken up after the post-construction traffic has subsided. Use of annual ryegrass provides additional benefits as</p>
-----------	--	--

Technical Deficiency Number	Technical Deficiency Description	Response
		<p>well. By following a low seeding rate per acre application, annual ryegrass allows sunlight to reach the soil surface, aiding in a reduced saturation time and a quicker warming period, thereby enhancing water infiltration and water-holding capacity. Other benefits to using this one genotype species is that it matures at a uniform rate, which supports the burndown of the stand in preparation for the restoration seeding. It is a common misconception that annual ryegrass is hard to kill; however, the Variety Not Specified seed proves to be more difficult to maintain and manage due to the varying rates of maturity within each bag. Lastly, annual ryegrass will germinate and grow in wetter conditions than many other cover crops species, making it an important stabilization cover crop for wetland restoration projects.</p> <p>Seeding specifications for the PRM sites are included within the PRM sites' plans, as Attachment Q-2 of the revised Application.</p>

61	<p>It appears that many of the stream crossings can be accessed from both banks, thereby eliminating the need for temporary road crossings and limiting impacts to the watercourses. Revise the alternatives analysis to explain why each proposed temporary road crossing is necessary. [25 PA Code §105.13(e)(1)(viii)]</p>	<p>While many of the streams could be accessed from both banks, this is not practical for the linear and sequential nature of pipeline construction. The bridge equipment crossings are essential for safe and efficient stream crossing installations. The bridge equipment crossings are necessary to install the prefabricated pipe segments for each stream crossing, as backhoes and side boom pipe-layers traverse the equipment bridges to safely and efficiently lower in the prefabricated pipe segment. The prefabricated pipe segment is typically covered with concrete coating and set-on concrete weights to provide for negative buoyancy after installation. These weights and coatings are extremely heavy, and would be out of reach for the equipment to install them safely without the use of the bridge equipment crossings. The prefabricated pipe segments cannot be drug into place from either side, as this would damage the protective coating. Coating damage can lead to accelerated corrosion and the potential for leaks to develop.</p> <p>Furthermore, the bridge equipment crossings are necessary to maintain a contiguous pipeline construction corridor. If the construction equipment had to turn around (“move-around”) at each stream crossing, larger additional workspaces and impacts would be required to facilitate bi-directional traffic. Typically, move-around workspaces are approximately 100’ wide X 200’ long, adjacent to the pipeline temporary workspace needed for the stream crossing. This would result in additional impacts to forested areas and/or agricultural lands. Additionally, equipment move-arounds require each piece of equipment to be loaded onto trailers and</p>
----	---	--

Technical Deficiency Number	Technical Deficiency Description	Response
		<p>trucked around from one road crossing to the next. This results in extended road use and subsequent damages as well as increased road traffic, creating additional hazards to public road users and creating slow traffic conditions as each piece of equipment is loaded and unloaded from the road. A typical drawing depicting the additional temporary workspace for equipment turnaround is attached to this Technical Deficiency response for reference.</p>
62	<p>Provide a detailed site specific pollution prevention and control plan that addresses potential inadvertent returns as well as hazardous and non-hazardous chemical releases. <i>[25 PA Code §105.21(a)(3)]</i></p>	<p>The HDD Contingency Plan in Attachment 3 of the ECP of the revised Application (Attachment M - provided under separate cover) addresses inadvertent returns. The Spill Plan for Oil and Hazardous Materials is included as Attachment 9 of the ECP, which is provided within Attachment M of the revised Application.</p>
63	<p>Several small and headwater tributaries will be impacted by this project. Avoid impacting the tributaries or explain how they will be restored to the pre-construction conditions when 2-foot contours are being utilized; which are, in many cases, greater than height of the banks of the watercourses, and provide a site specific restoration detail for each watercourse. <i>[25 PA Code §105.13(e)(1)(i)(G) & §105.13(e)(1)(ix) & §105.1, Mitigation & §105.13(e)(1)(x) & 105.15(a)(1) & §105.14(b)(4) & §105.16(d)]</i></p>	<p>Transco will stabilize the surface water banks and bed to preconstruction contours such that they are similar to banks at the limits of disturbance. Transco will also utilize pre-construction photographs. Banks will be stabilized using geotextile fabric. Attachment L-5, Enclosure D, Appendix L-4, Table 1 identifies each watercourse and the stream restoration detail to be utilized on either bank.</p>

Technical Deficiency Number	Technical Deficiency Description	Response
64	<p>Changes in proposed project impacts at various locations have occurred since initial application submission. Clearly explain what led to these changes for each location where increased impacts are now proposed and clearly explain why these impacts are necessary. In addition, clearly explain why some impacts have been lessened and explain why this can't occur at other locations. <i>[25 PA Code §105.13(e)(1)(viii)]</i></p>	<p>All changes to the Project since the initial Application submittal on August 28, 2015 and the administrative completeness response on December 4, 2016 that have resulted in increased, lessened, or eliminated impacts to regulated resources are a result of the incorporation of route deviations and new field survey data. Route deviations are defined as minor adjustments to the proposed route that are typically incorporated to avoid a specific feature (e.g., topography, sensitive habitat, structures) and/or to accommodate requests by affected landowners or jurisdictional agencies. New field survey data was collected for route deviations and of portions of the project that were previously-inaccessible at the time of the initial Application and administrative incompleteness response submittals. The Chapter 105 Impact Table, provided within Attachment E-2 of the revised Application, identifies new or revised impact information as bold, italicized text, while previously-identified impacts that have been avoided due to the incorporation of route deviations are presented as bold, strikethrough text, indicating that those resources are no longer impacted by the Project.</p>
65	<p>Installation of the pipeline on no-access parcels is needed to fulfill the basic purpose of the pipeline project. Therefore, provide detailed ground-verified information regarding onsite resources and provide revisions to all appropriate sections of the application. Please be advised that additional deficiencies may be generated pending receipt of the additional information. <i>[25 PA Code §§ 105.13(e)(1); 105.14; 105.16(a); 105.16(c)(3); 105.18a; 105.21(a)(1); 105.451(c)]</i></p>	<p>See response to Technical Deficiency 1.</p>

Technical Deficiency Number	Technical Deficiency Description	Response
66	The alternatives analysis states that the proposed pipeline will be co-located with existing pipeline ROWs where possible. However, it does not appear that the pipeline is co-located with existing utilities throughout much of Lebanon County. Provide plans showing nearby existing utility ROWs and provide an explanation of why the pipeline was not co-located in those locations. <i>[25 PA Code §105.13(e)(1)(viii)]</i>	Transco has provided mapping and a table in the revised Application providing justification for areas where the pipeline is not co-located with existing utilities (see Attachment P-1, Appendix P-3).

<p>67</p>	<p>Specific to the PRM Plan [25 PA Code §§105.13(e)(1)(ix), 105.20a, and 105.21(a)(1)]</p> <ul style="list-style-type: none"> a. According to the USFWS, "Bog turtles usually occur in small, discrete populations, generally occupying open-canopy, unpolluted, herbaceous sedge meadows and fens bordered by wooded areas". Therefore: <ul style="list-style-type: none"> i. Explain how the proposed mitigation will enhance bog turtle habitat when woody species are proposed to be planted and the area will no longer be maintained in an emergent state. ii. Clearly explain why planting woody species in a bog turtle wetland is an appropriate form of compensation to offset PFO wetland impacts. b. As currently proposed, the compensatory mitigation easement boundaries are likely to be difficult for the landowner and for Sunoco Pipeline, L.P. to identify. Provide a revised plan to include a method of permanently demarcating the easement boundaries. c. In regards to two new Sunoco Pipeline, L.P.'s pipelines that are proposed to cross the Hibred Farms PRM Site: <ul style="list-style-type: none"> i. It appears that the Sunoco Pipeline, L.P. construction workspace will encroach on the proposed easement boundaries. Revise the plans to show the construction workspace, and provide documentation to show that the mitigation will remain viable. ii. Provide documentation from Sunoco Pipeline, L.P. to support the assertion that the proposed mitigation easement boundary will not conflict with the proposed ROW for the Sunoco pipelines, and that no future expansion of the existing pipeline ROW will be attempted. iii. Explain how invasive species will be managed in the Sunoco Pipeline, L.P. ROW, or explain why long-term management is not necessary. d. The Planting Plan in the PRM Plan proposes wetland tree and shrub plantings at densities of 200 per acre. However, Table 6 in Section 6 of the PRM Plan indicates that no PFO wetlands will occur in the post-mitigation condition. <ul style="list-style-type: none"> i. Explain why tree and shrub plantings of 200 stems per acre will not result in PFO wetland creation. 	<p>The PRM Plan has been updated to provide the following clarifications:</p> <ul style="list-style-type: none"> a. <ul style="list-style-type: none"> i. The proposed mitigation addresses current impairments to sites existing hydrology. Upon review of the 1939 aerial imagery, the PRM Site exists in its natural state as a mixed PEM, PSS, PFO wetland. By 1959, aerial imagery indicates clearly that an intensive ditching system was installed to lower the water table in the area for agricultural practices. Since that time the main stem has continued to incise, creating a zone of depression adjacent to the incised channel, negatively affecting the hydrology of the wetlands on-site, while also creating instability and downstream sedimentation impacts. When compared to the bog turtle core habitat map, it can be seen that very little core habitat occurs adjacent to the main stem, further confirming the influence of the incision on the PRM Site's hydrology. Lastly these headcuts and the systems overall instability will continue to incise the side ditches, ultimately resulting in a reduction of core bog turtle habitat at the PRM Site. <p>The proposed mitigation addresses the incision of the main stem, stabilizing the stream, increasing stream and floodplain interaction, reducing downstream sedimentation, and raising the water table adjacent to the channel. This improved hydrology will enhance the bog turtle habitat on-site.</p> <p>The proposed woody PSS species are non-aggressive species, many of which</p>
-----------	--	---

	<ul style="list-style-type: none"> ii. If PFO wetland creation is not anticipated, explain why the proposed mitigation is appropriate to offset PFO wetland impacts. e. While the PA DEP understands that RES will implement and conduct monitoring and maintenance of the mitigation area on Transcontinental Gas Pipe Line Company's behalf, Williams Transco, as the permittee, will ultimately be responsible for the establishment of the mitigation area. Revise the mitigation plan report to clearly reflect this. f. According to the provided functions and values assessments for wetlands W-T30-4003, W-T30-4002, W-T13-4004, W-T14-5004, W-T30-6001 the wetlands provide a principal function of fish and shellfish habitat. However, according to the application, the PRM area will not provide this function. Therefore, explain how the mitigation area is appropriate to compensate for impacts to these wetlands. g. Explain why the application states that the Hibred Farms PRM area does not provide principal functions of flood flow alteration, nutrient removal, sediment/toxicant retention, uniqueness/heritage, sediment stabilization, and production export but will when mitigation activities are complete. The DEP finds it unclear how the function of the wetland will be changed through the mitigation procedures proposed. h. According the provided functions and values assessments, wetlands W-T32-6001 and W-T23-6002 provide critical habitat for a state or federally listed threatened or endangered species. However, Table L-4(c)-1 indicates that no wetlands in Lebanon County provide these benefits. Clarify this discrepancy. i. Table 3 in Section 5 states that a Chapter 105 general permit is under review for the mitigation area. DEP could find no record of a general permit application for this area. Provide additional information regarding submittal date of the application as well as detail related to the activity that the general permit is required for. 	<p>are currently present within the PRM Site. All selected species and planting rates were approved by the USFWS in consultation with bog turtle specialists from agencies in other states. In addition, species in adjacent bog turtle wetlands were inventoried as part of the species list selection. These plantings are proposed to be planted only in limited non-core habitat areas. Long-term, Transco is providing the long-term easement holder with a long-term maintenance and monitoring fund. This money can be used to ensure that there is no encroachment of any woody tree species into the core bog turtle habitat areas.</p> <p>Overall the restored main stem improves the hydrology of the site, addresses the current causes of instability, and when combined with the structure of the Projects proposed long-term maintenance and management provides a sustainable enhancement to the existing bog turtle habitat on-site.</p> <ul style="list-style-type: none"> ii. As stated in the response to 67.a.i, woody species plantings will occur in small non-core bog turtle habitat pockets within the wetland complex on-site. Of the species being planted, silky dogwood (<i>Cornus amomum</i>) and willow (<i>Salix</i> spp.) currently grow within the PRM Site. All selected species and planting rates were approved by the USFWS in consultation with bog turtle specialists from agencies in other states. In addition, species in adjacent bog turtle wetlands were inventoried as part of the species list selection.
--	--	---

		<p>The proposed mitigation is appropriate to compensate for PFO wetland conversion impacts based upon the completed functions and values analysis. As said in Section 6.1 Functional Impacts and Proposed Functional Uplift of the PRM Plan for the Atlantic Sunrise Project Hibred Farms Mitigation Site; "The wetland functions and values assessments performed at the Project impact locations and the PRM Site indicate that the mitigation site, once restored, will compensate and replace the functions and values impacted as a result of the Project by providing improved wildlife habitat, flood flow alteration, and nutrient removal/retention at comparatively high levels."</p> <p>More specifically, and by function, the PRM Site will improve its floodflow alternation function by addressing the streams current incision the stream and floodplain interaction is improved increasing infiltration in the floodplain wetlands, reducing overall flood peak flow and volume. Additionally, through converting upland farmland into native warm season grasses and wildflowers which reduces stormwater sheet flow, and increases infiltration.</p> <p>The PRM Site will improve wildlife habitat by improving hydrology within the wetlands on-site by addressing the stream incision as discussed in 67.a.i, and through the restoration current farm field into native warm season grasses and wildflowers. This creates high quality avian habitat as well as pollinator habitat.</p>
--	--	---

		<p>The PRM Site will improve nutrient removal and retention through the proposed stream restoration, which will reduce nutrient loading by eliminating the bank erosion at the site, reducing downstream sedimentation and associated nutrient loading. The restored stream and floodplain interaction will also increase nutrient retention through increase nutrient uptake in the on-site wetlands. Additionally, the restoration of upland pasture areas to native warm season grasses and wildflowers, which will reduce both nutrient loading from erosion, nutrient loading from fertilizer application, and nutrient retention through plant uptake.</p> <p>As seen above the proposed restoration is appropriate compensation to offset impacts from PFO wetland conversions.</p> <p>b. The perimeter of the PRM Site will be demarcated in the field in a manner that is easily identifiable. The permanent markers will be installed prior to or concurrent with construction of the components of the mitigation plan and be maintained and permanently visible for the life of the protected site.</p> <p>The boundary of the PRM Site will be demarcated using 8-foot PVC pipe anchored with a metal T post. Signage will be posted on the metal T posts to indicate that the site is a PRM Site protected under a conservation easement, and will include PA DEP and United States Army Corps of Engineers (USACE) authorization numbers.</p>
--	--	--

		<p>c.</p> <p>i. The design plans have been revised to show the construction workspace and are provided in the revised Hibred Farms PRM Site Plan. The construction workspace is also shown on Figure 9: Resource Development Map of Appendix A: Figures of the PRM Plan. The restoration project boundaries were created in coordination with Sunoco to ensure that there were no permanent overlaps of project boundaries. The construction workspace is located within the upland areas of the parcel, where the work to be conducted by Sunoco or their affiliate will consist of HDD boring from the temporary work space. This will avoid disturbance to the wetland areas. Based upon the sequencing of the proposed Sunoco project, the pipeline work will be completed prior to the upland restoration sequencing, when the area is still active farmland. No temporary work is being done in the projects wetland spaces, and Sunoco's permanent pipeline easements were taken into consideration when the easement boundaries for the project were set.</p> <p>Furthermore, The PRM Project will be protected by a deed of restrictive covenant or conservation easement in advance of the proposed activities outlined in the PRM Plan, ensuring the long-term protection of the site. The mitigation easement will ensure that the PRM Site will be permanently protected in perpetuity from uses that are incompatible with the objectives of the PRM Plan.</p>
--	--	--

		<ul style="list-style-type: none">ii. On September 10, 2015, Sunoco, L.P. (Sunoco) and Transco's subconsultant signed an agreement (provided within Attachment Q-2) supporting the assertion that the proposed mitigation easement boundary will not conflict with the proposed permanent ROW for the Sunoco pipelines. As part of the agreement, Sunoco has acknowledged Transco's subcontractor's proposed mitigation easement boundary and, given the mutual benefits expected for both parties, Sunoco does not object to the placement of the mitigation easement boundary.iii. Furthermore, as stated in <i>Section 4.0 Site Protection Instrument</i> of the PRM Plan, the PRM Project will be protected by a deed of restrictive covenant or conservation easement in advance of the proposed activities outlined in this mitigation plan, ensuring the long-term protection of the site. The site protection instrument will be recorded within 60 days in the county courthouse after USACE/PA DEP approval, with subsequent approval from the Permittee to move forward with mitigation. This will ensure that the PRM Site will be permanently protected from uses that are incompatible with the objectives of the PRM Plan.d. There are three proposed areas within the PRM Site where the proposed planting plan includes shrub species at a rate of 100 plants per acre, totaling approximately 3.745 acres. Due to the lower planting densities these areas were not specifically called out as being PFO post-restoration.
--	--	--

		<ul style="list-style-type: none">i. The planting plan for the Project has been revised in coordination with the USFWS. Based upon the updated plan, there are three proposed areas within the PRM Site where the proposed planting plan includes only and shrub species, totaling approximately 3.745 acres. These areas are being planted at a rate of 100 plants per acre. Due to the lower planting densities these areas were not specifically called out as being PSS post-restoration.ii. There are three proposed areas within the PRM Site where the proposed planting plan includes shrub species, totaling approximately 3.745 acres. Due to the lower planting densities these areas were not specifically called out as being PSS post-restoration. For the remainder of the response, please see the response to comment 67.a.ii.e. As stated in <i>Section 1.0: Introduction of the Hibred Farms PRM Site Plan</i>, “<i>Transco will be responsible for implementation of the PRM Plan in addition to meeting performance standards, monitoring and long-term management of the property as described in 33 CFR §332.3(i). The Permittee will remain responsible for legal duties and responsibilities associated with wetland mitigation as necessary in accordance with PA DEP Chapter 105 Rules and Regulations regarding wetland replacement criteria guidelines and 33 CFR §332.</i>” These legal duties and responsibilities include establishment of the mitigation area.
--	--	---

		<p>f. The Function Value Evaluations forms for the Hibred Farms PRM Site (provided as Appendix F: Wetland Function and Values Assessment Forms of the PRM Plan, which is provided within Attachment 2 of the revised Application) indicate that post-restoration, the fish and shellfish habitat function/value will be a principal function at the PRM Site. Text within the PRM Plan indicating that this function is not a primarily function has been corrected. Restoration activities will result in stabilization of the currently eroded and incised stream, thereby reducing sedimentation and improving aquatic habitat. Vegetative enhancement coupled with instream restoration activities as described in the revised PRM Plan will provide appropriate compensation for impacts to wetlands W-T10-100 and W-T20-002.</p> <p>g. The rationale and list of considerations to determine suitability and principal functionality of wetlands as provided in Appendix A of the USACE <i>Highway Methodology Workbook Supplement: Wetland Functions and Values</i> (1993), Transco's subconsultant determined that the Hibred Farms PRM Site is suitable for seven of the 13 core functions/values evaluated as part of the wetland evaluation, of which include groundwater recharge/discharge, floodflow alteration, sediment toxicant retention, nutrient removal, wildlife habitat, uniqueness/heritage, and endangered species habitat. Because of the significant extent of degradation within and surrounding the PRM Site, only two of these functions are</p>
--	--	--

		<p>principal functions. Transco does not anticipate a change in the principal functions of the wetland, but rather an ecological uplift to the wetland such that those functions and values that the wetland is currently (pre-restoration) suitable for, will become principal functions, post-restoration. The restoration activities proposed at the PRM Site will significantly enhance the ecological and biological integrity of the PRM Site such that not only will the extent of suitable functions/values increase for the wetland (10 suitable functions and values post-restoration), but the extent of principal functions will also increase (eight principal functions post restoration).</p> <p>More specifically, and by function, the PRM Site will improve its Flood Flow Alternation function by addressing the streams current incision the stream and floodplain interaction is improved increasing infiltration in the floodplain wetlands, reducing overall flood peak flow and volume. Additionally, through converting upland farmland into native warm season grasses and wildflowers which reduces stormwater sheet flow, and increases infiltration.</p> <p>The PRM Site will improve wildlife habitat by improving hydrology within the wetlands on-site by addressing the stream incision as discussed in 55.a.i, and through the restoration current farm field into native warm season grasses and wildflowers. This creates high quality avian habitat as well as pollinator habitat.</p>
--	--	---

		<p>The PRM Site will improve nutrient removal and retention through the proposed stream restoration, which will reduce nutrient loading by eliminating the bank erosion at the site, reducing downstream sedimentation and associated nutrient loading. The restored stream and floodplain interaction will also increase nutrient retention through increase nutrient uptake in the on-site wetlands. Additionally, the restoration of upland pasture areas to native warm season grasses and wildflowers, which will reduce both nutrient loading from erosion, nutrient loading from fertilizer application, and nutrient retention through plant uptake.</p> <p>Again, Transco does not anticipate any wetland functionality to change, rather an improvement such that pre-restoration suitable functions become post-restoration principal functions.</p> <p>h. Wetland W-T32-6001 is not listed as providing critical habitat for a state or federally listed threatened or endangered species, however W-T23-6002 is listed as providing this function. The discrepancy in Table L-4(c)-1 has been updated to indicate that a wetland in Lebanon County does provide that benefit.</p> <p>i. Summary of PRM Site Clearances and Approvals in the PRM Master Plan for the Atlantic Sunrise Project – Lebanon County, incorrectly indicated that a PA DEP Chapter 105 General Permit is under review. The PRM Plan has been revised appropriately.</p>
--	--	--

Technical Deficiency Number	Technical Deficiency Description	Response
		j. Impacts associated with construction of the Hibred Farms PRM Site are being permitted as part of the proposed Project.
68	Section 6 of the PRM Plan indicates that impacts to PSS wetlands are temporary because the areas will be allowed to revert to PSS wetlands. The application further states that a 10-foot ROW will be maintained as frequently as once annually. Provide documentation to support the claim that scrub shrub wetlands will establish with such frequent mowing and further clarify in the application if vegetative maintenance will involve herbicides. <i>[25 PA Code §105.18a, §105.2(a)(1)]</i>	Transco is providing off-site compensatory mitigation for temporal conversion of PSS wetlands to palustrine emergent wetlands within a 10-foot wide operation and maintenance corridor centered over the pipeline within the permanent easement. The Mitigation Master Plan and PRM Plan are provided as Attachments Q-1 and Q-2 within the revised Application.
69	Streams WW-T14-5006 and WW-T43-5003 are navigable waterways of the Commonwealth. Therefore, installation of the pipeline requires Submerged Lands License Agreements for these crossings. Provide additional documentation as indicated on the enclosed form. <i>[25 PA Code § 105.31(b)(1)]</i>	Transco will request SLLA approval in November of 2016 from the PADEP, and will be provided notification upon receipt.

<p>70</p>	<p>The following deficiencies relate to the proposed hydrostatic test water withdrawal [25 PA Code §§105.13(e)(1) & 105.31 (b)(1)]</p> <ul style="list-style-type: none"> a. Provide plans and cross sections indicating pipe size, placement, and locations for all wetlands, streams, floodways and floodplains where the proposed water withdrawal piping is to be installed. The cross sections should depict, at a minimum, the proposed structures, resource boundaries, stream bed and banks, and water surface elevations. If a temporary intake, outfall, or pipe will be installed in Streams WW-T14-5006 and WW-T43-5003 a Submerged Lands license Agreement will be required. b. Provide a description and plans of how the water will be withdrawn, the methods to be utilized, what equipment and structures are proposed to be placed and utilized in waters of the Commonwealth, the length of time which obstructions will remain in place. c. Provide a cross sections, profiles, and hydraulic analysis for piping placed in existing stream culverts and along and within stream channels, if applicable. 	<p>The revised Application includes a description and revised drawings to depict the proposed water withdrawal locations. Transco will request SLLA approval in November of 2016 from the PA DEP, and will be provided notification upon receipt.</p> <ul style="list-style-type: none"> a. All water withdrawals will be completed in compliance with the Susquehanna River Basin Commission (SRBC) dockets. One water withdrawal site is planned for Lebanon County: (1) Swatara Creek. The SRBC approved the docket for this water withdrawal location on September 8, 2016. The location of the water withdrawal equipment relative to wetlands, streams, floodways, and floodplains are captured in the revised Chapters 102 and 105 drawings (see Attachment H-2). b. Water withdrawals from Swatara Creek will be completed in compliance with the SRBC docket. The SRBC docket and metering plan provide details regarding the methods to be used to withdraw water. The equipment will remain in place only as long as is necessary to complete the water withdrawals. All 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 (see Attachment L-5, Enclosure D, Section D). c. No piping will be placed in existing stream culverts. Cross sections, profiles, and hydraulic analysis of piping to be placed in stream channels was completed for the SRBC dockets. This information is provided in Attachment L-5, Appendix L-5.
-----------	--	---

Technical Deficiency Number	Technical Deficiency Description	Response
71	According to the application, the project crosses the Ft. Indiantown Gap National Guard Training Center. Provide a revised risk assessment to demonstrate that current or future routine training exercises conducted at Ft. Indiantown Gap will not jeopardize the integrity of the pipeline, resulting in an increased risk to public safety. <i>[25 PA Code §105.14(b)(1)]</i>	Attachment L-5, Enclosure D, Section A1 of the revised Application includes an updated risk assessment that demonstrates operations at Fort Indiantown Gap will not jeopardize the integrity of the pipeline.
72	Revise section A.9 of Enclosure D of the Environmental Assessment to discuss and identify impacts to preserved farms and/or farms with agriculture preservation easements or restrictions. <i>[25 PA Code §§105.13 (e)(1)(x) & 105.15]</i>	Attachment L-5, Enclosure D, Section A9 of the revised Application is updated to discuss and identify impacts to preserved farms and/or farms with agriculture preservation easements or restrictions.
73	Provide a revised Enclosure D of the Environmental Assessment that includes plans to minimize impacts to recreational opportunities on the Appalachian Trail/State Game Lands 211, Lebanon Valley Rail Trail, Horse-Shoe Trail, and Swatara Creek Trail. <i>[25 PA Code §105.13 (e)(1)(x) & §105.14(b)(4) & §105.15(a)]</i>	Attachment L-5, Enclosure D, Section A1 of the revised Application includes plans to minimize impacts to recreational opportunities on the Appalachian Trail/State Game Lands 211, Lebanon Valley Rail Trail and Horse-Shoe Trail. Crossing Plans are included in Attachment L-5, Appendix L-2. The Swatara Creek Water Trail is included in the ATON submitted to PFBC and implementation of the approved ATON plan will minimize impacts on recreation use of the trail.
74	The application does not adequately explain the need to install the pipeline across watercourses "in the wet". Installation of the pipeline across watercourses "in the wet" may result in adverse impacts to water quality in watercourses that are being crossed. Select an alternate crossing technique for each crossing where work "in the wet" is currently proposed, and remove the "in the wet" detail from the ES plans or provide a demonstration that the selected crossing technique avoids and minimizes impacts to the watercourse to the greatest extent practicable. <i>[25 PA Code §105.13(e)(1)(viii)]</i>	All "in the wet" crossings within Lebanon County have been removed and the crossing methods have been revised to dam and pump or flumes.

Technical Deficiency Number	Technical Deficiency Description	Response
75	<p>Explain why construction ROWs in wetlands exceed the maximum width of 75 feet as recommended by the FERC. <i>[25 PA Code §105.18(a)]</i></p>	<p>Transco has re-evaluated each individual wetland crossing and reduced the construction workspace width to 75 feet wherever possible, consistent with the FERC Procedures. Modifications to the construction limits for each individual wetland crossing are provided in Attachment P-1, Appendix P-1 of the revised Application. Appendix P-1 includes justifications for any wetland crossings where workspace reduction to 75 feet was not possible.</p>
76	<p>Revise Enclosures C&D to assess the condition of, and impacts to forested and scrub shrub riparian areas and the habitat, water quality, and other impacts on watercourses for each watercourse crossing. In general, the PA DEP recommends evaluating the riparian areas from the top of bank landward 100ft, and if the area utilized is less than 100-foot justification should be given as to why. The application should be revised to replant the vegetation lost in both permanent and temporary ROW and workspaces. Alternatively, where it cannot be replaced and provided permanent protection, provide details on why it cannot be replaced and provide compensatory mitigation for the impacts and discuss the impacts to the watercourses in the Environmental Assessment, including water quality impacts. <i>[25 PA Code §105.13(e)(1)(x) & §105.14(b)(4) & §105.14(b)(11) & §105.14(b)(12) & §105.14(b)(14) & §105.15a) & §105.15(a)(1) & §105.15(b) & §105.16(d) & DEPs Riparian Forest Buffer Guidance, Document# 394-5600-001] [Sweeney, B.W., and Newbold, J.B., <u>Streamside Forest Buffer Width Needed to Protect Stream Water Quality, Habitat, and Organisms; A Literature Review, Journal of the American Water Resources Association, Volume 50, No. 3, 2014]</u></i></p> <p>a. To aid in evaluating the condition of and change in condition to watercourses and wetlands, the PA DEP recommends utilizing the Draft Pennsylvania Riverine Condition Level 2 Rapid Assessment Protocol and the Draft Pennsylvania Wetland Condition Level 2 Rapid Assessment Protocol. This protocol is not for identifying the functions and values of the resources, but rather is utilized to assess the current and proposed conditions of</p>	<p>Enclosures C and D (Attachments L-4 and L-5) of the revised Application include an evaluation of the existing condition of and impacts to forested and scrub shrub riparian areas.</p> <p>A Riparian Area Impact Assessment and Restoration Plan for the Project area in Lebanon County is provided in Attachment L-5, Appendix L-3.</p> <p>Refer to the responses to Technical Deficiencies 12 and 13.</p>

Technical Deficiency Number	Technical Deficiency Description	Response
	<p>the resources utilizing current environmental principles. While the Protocols are not final, the PA DEP encourages their use. [25 PA Code §105.14(a) & §105.14(b)(4) & 105.14(b)(13) & §105.14(b)(12) & §105.15(a) & §105.15(a)(1) & §105.15(b) & §105.18a(a)(1) & §105.13(e)(1)(x)]</p>	
77	<p>Specific to the wetland determination data forms [25 PA Code §§105.21(a)(1) and 105.451(c)]:</p> <ol style="list-style-type: none"> a. The first pages of several of the wetland and upland delineation forms are not consistent with the U.S. Army Corps of Engineers' 2012 Regional Supplement for the Eastern Mountains and Piedmont Region. Provide revised data sheets. b. The data sheet for Wetland W-T30-4003 states that the wetland "should be re-surveyed in spring when herbaceous vegetation is visible and hydrologic indicators are apparent". Clarify if the wetland was re-surveyed as recommended and indicate if re-survey of any other wetlands is also necessary. 	<p>The revised Application:</p> <ol style="list-style-type: none"> a. Includes completed 2012 Regional Supplement for the Eastern Mountains and Piedmont Region for all delineated wetland resources. These forms have been provided within the revised wetland delineation report, which is provided as Attachment L-2 of the Application. b. Wetland W-T30-4003 is no longer impacted by the Project and has been removed from the revised Application.