pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

July 29, 2016

Ms. Roberta Zwier
Transcontinental Gas Pipe Line Company, LLC.
2800 Post Oak Boulevard, Level 6
Houston, Texas 77056

Re: Technical Deficiency
Atlantic Sunrise Pipeline
Application No E38-195
APS No. ID No. 880147
Cold Springs, East Hanover, North Annville, South Annville, South Londonderry, Swatara, North Lebanon, and Union Townships
Lebanon County

Dear Ms. Zwier:

The Department of Environmental Protection (DEP) has reviewed the above referenced application package and has identified the following significant technical deficiencies. ***Chapter 105 Dam Safety and Waterway Management regulations*** includes information that will aid you in responding to some of the deficiencies listed below. The deficiencies are based on applicable laws and regulations, and the guidance sets forth DEP's preferred means of satisfying the applicable regulatory requirements.

As you are aware, Department staff in three different regional offices is reviewing seven other Chapter 105 permit applications associated with this project. While the regional offices have coordinated the review of the applications and the identification of deficiencies, it is possible that deficiencies raised in the Department's other deficiency letters may be applicable to this permit, even though not stated herein. The Department recommends that Williams evaluate whether any of the deficiencies identified in the other Chapter 105 permit application deficiency letters, beyond those deficiencies identified in this letter, necessitate revisions in this permit application.

Note: Due to multiple reviewers and the size of the document there may be some duplicate deficiencies although every attempt was made to eliminate duplications.

Technical Deficiencies

1. Upon further evaluation by the Department and in accordance with the 25 Pa. Code § 105.13(e), complete delineation of impacts to wetlands, streams and floodways needs to be provided for the Department to perform the required environmental review of the application and make a proper permit decision. The impacts to wetlands, streams and flood ways 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 floodways 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. *[25 Pa. Code §105.13(e)]*

2. Several flume crossings are shown in the ES 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. *[25 Pa. Code §105.13(e)(1)(x)]*

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. *[25 Pa. Code §105.301(9)]*

4. Provide agency clearance letters and copies of correspondence from the Pennsylvania Fish and Boat Commission, Pennsylvania Game Commission, Pennsylvania Department of Conservation and Natural Resources, and U.S. Fish and Wildlife Service 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)]*

5. 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)]*

6. 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)]*

7. Explain how the final "restored" wetland elevations will be determined. *[25 Pa. Code §105.13(e)(1)(ix)]*

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 (conventional bore, HDD, micro-tunneling, etc.) addressing each resource crossing individually and explaining why trenchless installation methods are not appropriate. *[25 Pa. Code §§105.13(e)(1)(viii) & 105.18a]*

9. The following deficiencies relate to the proposed HDD*[25 Pa. Code §§105.3(a)(4) & 105.11(a) & 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) and (3) & 105.161(a)(3) and (4)]*:

    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.

10. 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 DEP's eMapPA to identify public water supplies in the vicinity of your project. *[25 Pa. Code §§105.13(e)(1)(ii) & 105.13(e)(1)(x) & 105.14(b)(5)]*

11. 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) & Environmental Assessment Form Instructions]*

12. Revise the application to provide a planting plan to re-establish woody vegetation within the temporary construction ROWs 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)]*

13. 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)]*

14. Several streambank stabilization methods are proposed in the Erosion and Sedimentation Control plans. Identify where each type of stabilization measure will be utilized. *[25 Pa. Code §105.21(a)(1)]*

15. 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. *[25 Pa. Code §§105.13(e)(1)(viii) & 105.18a]*

16. 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. *[25 Pa. Code §105.21(a)(1)]*

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 blasting permit from the Pennsylvania Fish and Boat Commission may be needed. *[25 Pa. Code §105.21(a)(1)]*

18. An Aids to Navigation (ATON) plan may be required for this project. Contact Thomas Burrell with the Pennsylvania Fish and Boat Commission at 717.705.7838 regarding ATON requirements, and provide a copy of the ATON approval to DEP. *[25 Pa. Code §105.14(b)(2)]*

19. The Joint Permit Application Plans shall be the final plans for construction. Remove the reference to "Preliminary/Draft" from all plan sheets. *[25 Pa. Code §105.13(e)(1)(i)(C)]*

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. *[25 Pa. Code §105.18a]*

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 Department 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. *[25 Pa. Code §§105.13(e)(1)(vii) &105.18a]*

22. According to the Hydrologic & Hydraulic Calculations for Waterbody Crossings (H&H) 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 §105.161]*

23. 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. *[25 Pa. Code §105.161]*

24. In reviewing the plans, 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)]*

25. 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 25 Pa. Code § 105.13(e)(1)(x)]*

    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.

26. Provide an Impact Map for the following items. Revise all other application documents to reflect the additional impacts. *[25 Pa Code 25 Pa. Code § 105.13(e)(1)(viii) & §105.13(e)(1)(x)]*

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.

27. 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 applicable 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)]*

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/37.85-01Wetland 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.

k. Impact Map 24-1600-70-09-A/39.25-01Stream 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.

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 LOD 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 LOD 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.

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 LOD 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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

zzz. Impact Map 24-1600-70-20-A/58.51-01Wetland W-T43-6002 - could be avoided by reducing the LOD from the center of the pipeline.

aaaa. Impact Map 24-1600-70-20-A/58.51-01Wetland W-T43-6002 - could be minimized or avoided by relocating the pipeline to the southwest.

bbbb. Impact Maps 24-1600-70-20-A/58.72-01, Sheets 1 and 2 Impact Maps 24-1600-70-20-A/58.72-01Wetland W-T23-6002C-1 - could be minimized by reducing the LOD from the center of the pipeline.

cccc. Impact Maps 24-1600-70-20-A/58.72-01Wetland W-T23-6002A-2 - could be minimized or avoided by relocating the pipeline to the southwest or northeast.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

pppp. Impact Map 24-1600-70-09-A/63.69-01Stream WW-T10-7003, - could be minimized by reducing the LOD from the center of the pipeline.

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.

rrrr. Impact Map 24-1600-70-09-A/64.07-01Stream WW-T10-7001, - could be minimized by reducing the LOD from the center of the pipeline.

28. 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]*

    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

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 Erosion and Sediment (ES) plan set. Clarify the discrepancy and revise the plans as appropriate. *[25 Pa. Code §105.13(e)(1)(i)(g)]*

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. *[25 Pa. Code §105.13(e)(1)(i)(g)]*

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. *[25 Pa. Code*

§105.13(e)(1)(i)(g)]

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. *[25 Pa. Code §105.13(e)(1)(x)]*:

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. *[25 Pa. Code §105.13(e)(1)(i)(c)]*

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. *[25 Pa. Code §105.13(e)(1)(x)]*

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. *[25 Pa. Code §105.21(a)(1)]*

36. The following deficiencies relate to ES Plan Drawing 24-1600-70-28-A/LL113_9, Sheet 5 of 28*[25 Pa. Code §§ 105.13(e)(1)(viii) &105.13(e)(1)(x)]*

    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 right-of-way (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.

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)]*

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

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)]*

40. ES Plan Drawing 24-1600-70-28-A/LL113_9 Sheet 20 of 28-It appears that the temporary construction Right-of-Way (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)]*

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)]*

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)]*

43. Several different equipment crossing details are provided in the E&S Plans. Revise the ES plans to identify where each type of crossing will be utilized. *[25 Pa. Code §105.13(e)(1)(i)]*

44. Impact Drawings – Clarify what Existing TGPL R/W stands for as is shown in the Legend. *[25 Pa. Code §105.13(e)(1)]*

45. Impact Map 24-1600-70-09-A/37.25-01, 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) & 105.1(e)(1)(x)]*

46. 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)]*

    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.

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]*

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)]*

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)]*

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)]*

51. The wetland and stream boundaries on several impact sheets overlap. Provide revised plan sheets with the boundaries clearly delineated. *[25 Pa. Code §105.13(e)(1)(i)(A)]*

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)]*

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)]*

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)]*

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)]*

56. Identify the principal function(s) of wetlands W-T14-5016 and W-T33-6001. *[25 Pa. Code 105.13(e)(2)]*

57. 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.

a. As such, they are considered exceptional value. Provide revised copies of all appropriate sections of the application. *[25 Pa. Code §105.17(1)(i)]*

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. *[25 Pa. Code §105.21(a)(1)]*

58. The functions and values data sheets are not completed in their entirety. Provide completed data sheets. *[25 Pa. Code §105.21(a)(1)]*

59. 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. *[25 Pa. Code §§105.13(e)(1)(ix) & 105.18a]*

60. As discussed in the April 28, 2014 response letter from the U.S. Fish and Wildlife Service, Annual Ryegrass is discouraged due to its tendency to compete with native species. Revise all applicable sections of the application to propose alternatives to annual ryegrass, such as cereal oats or grain rye. *[25 Pa. Code §105.13(e)(1)(ix)]*

61. 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)]*

62. Provide a detailed site specific pollution prevention and control plan that addresses potential inadvertent returns as well as hazardous and non-hazardous chemical releases. *[25 Pa. Code § 105.21(a)(3)]*

63. 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. *[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)]*

64. 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. *[25 Pa. Code §105.13(e)(1)(viii)]*

65. 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. *[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)]*

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. *[25 Pa. Code §105.13(e)(1)(viii)]*

67. Specific to the Permittee Responsible Mitigation Plan *[25 PA §§Code 105.13(e)(1)(ix), 105.20a, and 105.21(a)(1)]*

    a. According to the U.S. Fish and Wildlife Service, "Bog turtles usually occur in small, discrete populations, generally occupying open-canopy, unpolluted, herbaceous sedge meadows and fens bordered by wooded areas". Therefore:

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 mitigation site:

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 Permittee Responsible Mitigation Plan proposes wetland tree and shrub plantings at densities of 200 per acre. However, Table 6 in Section 6 of the Permittee Responsible Mitigation Plan indicates that no PFO wetlands will occur in the post-mitigation condition.

i. Explain why tree and shrub plantings of 200 stems per acre will not result in PFO wetland creation.

ii. If PFO wetland creation is not anticipated, explain why the proposed mitigation is appropriate to offset PFO wetland impacts.

e. While the Department understands that RES will implement and conduct monitoring and maintenance of the mitigation area on Transcontinental Gas Pipeline 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 Permittee Responsible Mitigation 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 Mitigation 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.

68. Section 6 of the Permittee Responsible Mitigation Plan states 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 permanent 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. *[25 Pa. Code §§ 105.18a & 105.21(a)(1)]*

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. *[25 Pa. Code §105.31(b)(1)]*

70. The following deficiencies relate to the proposed hydrostatic test water withdrawal*[25 Pa. Code §§105.13(e)(1) &105.31(b)(1)]*:

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, water surface elevation. 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.

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. *[25 Pa. Code §105.14(b)(1)]*

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. *[25 Pa. Code §§105.13(e)(1)(x) & §105.15]*

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. *[25 Pa. Code §105.13(e)(1)(x) & §105.14(b)(4) & §105.15(a)]*

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. *[25 Pa. Code §105.13(e)(1)(viii)]*

75. Explain why construction ROWs in wetlands exceed the maximum width of 75 feet as recommended by FERC. *[25 Pa. Code §105.18(a)]*

76. 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, DEP recommends evaluating the riparian areas from the top of bank landward 100ft, and if the area utilized is less than 100ft 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. *[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., 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]*

a. To aid in evaluating the condition of and change in condition to watercourses and wetlands, the Department 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 the resources utilizing current environmental principles. While the Protocols are not final, the Department 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)]*

77. Specific to the wetland determination data forms *[25 Pa. Code §§105.21(a)(1) and §105.451(c)]*:

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.

You must submit a response for each of the above deficiencies. The re-submission shall be a complete standalone submission that will be used for authorization under E38-195. You may request a time extension, in writing, before September 27, 2016 to respond to deficiencies beyond the sixty (60) calendar days. Requests for time extensions will be reviewed by DEP and considered. You will be notified in writing of the decision either to grant or deny, including a specific due date to respond if the extension is granted. Time extensions shall be in accordance with 25 Pa. Code §105.13a(b).

Pursuant to 25 Pa. Code §105.13a of DEP's Chapter 105 Rules and Regulations you must submit a response fully addressing each of the significant technical deficiencies set forth above. Please note that this information must be received within sixty (60) calendar days from the date of this letter, on or before September 27, 2016 or DEP may consider the application to be withdrawn by the applicant.

If you believe that any of the stated deficiencies is not significant, instead of submitting a response to that deficiency, you have the option of asking DEP to make a decision based on the information with regard to the subject matter of that deficiency that you have already made available. If you choose this option with regard to any deficiency, you should explain and justify how your current submission satisfies that deficiency. Please keep in mind that if you fail to respond, your application may be withdrawn or denied.

Should you have any questions regarding the identified deficiencies, please call Mr. Nathan Phillips at 717.705.4822, and refer to Application No. E38-195, Atlantic Sunrise to discuss your concerns or to schedule a meeting. The meeting must be scheduled within the 60-day period allotted for your reply, unless otherwise extended by DEP. You may also follow your application through the review process via *eFACTS on the Web* at: http://www.ahs2.dep.state.pa.us/eFactsWeb/default.aspx.

Sincerely,

Edward J. Muzic, P.E.
Civil Engineer Manager, Hydraulic
Dam Safety, Waterways & Wetlands Section

Enclosure

cc: US Army Corps of Engineers, Baltimore District, Michael Dombroskie
US Environmental Protection Agency, Jamie Davis
Lebanon County Conservation District
Aaron Blair, Transcontinental Pipe Line Company, LLC
John Zimmer, TRC Environmental
Cold Springs Township
East Hanover Township
North Annville Township
North Lebanon Township
South Annville Township
South Londonderry Township
Swatara Township
Union Township