pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

September 6, 2016

Matthew L. Gordon
Sunoco Pipeline, L.P.
535 Fritztown Road
Sinking Spring, PA 19608

Re: Technical Deficiency
Pennsylvania Pipeline Project (aka Mariner East II)
Application No. E31-234
APS No. 879354
Penn, Shirley, Union, and Tell Townships, Huntingdon County

Dear Mr. Gordon:

The Department of Environmental Protection (DEP) has reviewed the above referenced application package and has identified the following significant technical deficiencies. The Chapter 105 Dam Safety and Waterway Management regulations include information that will aid you in responding to some of the deficiencies listed below. The deficiencies are based on the requirements of Article I, Section 27 of the Pennsylvania Constitution, applicable laws and regulations, and the guidance that sets forth DEP's recommended means of satisfying the applicable requirements.

As you are aware, Department staff in three different regional offices are reviewing sixteen 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 Sunoco Pipeline, L.P. evaluates 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.

Technical Deficiencies

Common Technical Deficiencies

1. Comprehensive Environmental Evaluation - The following technical deficiencies are related to the overall project comprised by the 17 Chapter 105 Water Obstruction and Encroachment permit applications associated with this pipeline. Please provide the Department with a Comprehensive Environmental Evaluation of the Entire Pipeline Project as a Whole ("Comprehensive Environmental Evaluation") which at a minimum includes the following:

    a. Use the Environmental Assessment Form (3150-PM- BWEW0017, 2/2013) as a guide and provide a detailed narrative and other appropriate documentation that comprehensively evaluates the project as a whole under each of the categories therein

(Part 1 – Resource Identification; Part 2 – Project Description – including all the analyses listed in the form, as well as in 25 Pa. Code §§ 105.13(e)(1)(vii-x), (2), (3), (g), and (j); and 25 Pa. Code § 105.15.

b. The Comprehensive Environmental Evaluation should also provide a detailed narrative and other appropriate documentation that comprehensively evaluates the project as a whole for compliance with the requirements associated with the Department's review of the application listed in 25 Pa. Code § 105.14 in its entirety, with particular emphasis on:

i. Antidegration Analysis - Prepare and submit an analysis and information that addresses consistency with State antidegradation requirements contained in Chapters 93, 95 and 102 (relating to water quality standards; wastewater treatment requirements; and erosion and sediment control) and the Clean Water Act (33 U.S.C.A. § § 1251—1376) for this entire project and other potential or existing projects. 25 Pa. Code § 105.14(b)(11).

ii. Secondary Impact Analysis – Prepare and submit an analysis and information that addresses secondary impacts associated with but not the direct result of the construction or substantial modification of the water obstruction or encroachment in the areas of the entire project and in areas adjacent thereto and future impacts associated with water obstructions or encroachments, the construction of which would result in the need for additional dams, water obstructions or encroachments to fulfill the project purpose. 25 Pa. Code § 105.14(b)(12).

iii. Project Wide Cumulative Impacts Analysis. Prepare and submit an analysis and information that addresses the cumulative impact for this entire project and other potential or existing projects. As part of this analysis please evaluate whether numerous piecemeal changes associated with all the chapter 105 applications related to this pipeline project may result in a major impairment of the wetland resources. The analysis must be undertaken for each alternative prepared for the proposed pipelines and facilities of Mariner East II, on a statewide basis and must be completed for the entire project, as a whole referencing each of the applications for the entire project. 25 Pa. Code §§ 105.14(b)(14); and 105.15.

iv. Comprehensive Evaluation of Compliance with 25 Pa. Code § 105.18a. Prepare and submit an analysis and information that evaluates the project as a whole with all the requirements found in 25 Pa. Code § 105.18a for each wetland or wetland complex in or along the project area as a whole. 25 Pa. Code § 105.18a.

v. Comprehensive Alternatives Analysis, Avoidance and Minimization and Mitigation. The applicant needs to demonstrate, that the alternative/s chosen for the entire project will avoid cumulative impacts to the maximum extent

practicable, and where such impacts are not avoidable, describe in detail with appropriate supporting documentation, how such impacts will be minimized and mitigated to the satisfaction of the Department. *[25 Pa Code §§ 105.1, 105.13(e)(1)(viii)-(x); 105.14(b); and 105.15-105.20a.]*

2. The HDD Inadvertent Return Contingency Plan includes profiles identifying Geotechnical profiles; however, no analysis has been provided on the risk of an inadvertent return occurring. Provide an analysis on the risk of an inadvertent return occurring for all proposed HDD crossings. Include in-depth detail, discussion, and data in the analysis of the risk of a return occurring. *[25 Pa. Code §§105.14(b)(7), 105.18a(b)(3), 105.18a(b)(4), 105.18a(b)(5), 105.14(b)(4), 105.14(b)(11)]*

   a. Provide information/details on previous HDD activities on the prior Mariner East pipeline project where IRs occurred. At a minimum this should include, a topographic map with locations and latitude/longitude of each occurrence, description of event, amount of discharge, whether the discharge entered waterways and/or wetlands, mitigation/clean-up measures taken, etc.

   b. A stand-alone attachment should be created to address the pre-boring geologic evaluation of the existence and potential to impact local drinking water supplies or aquifers around the boring location. The plan needs to include what measures will be employed to verify that no supplies or aquifer are impacted (i.e. pre and post water quality and quantity analysis). The plan should specify what notifications and remediation measures will be employed if there are impacts.

3. EV wetlands are defined as EV waters by Chapter 93. Therefore, explain the measures the applicant will implement to comply with the antidegradation requirements of the Department's water quality standards program.*[25 Pa Code §93.4c(b); §93.4c(b)(2); §93.1 (defn. of surface water of exceptional ecological significance); §105.14(b)(11); §105.18a(a)(4); 24 Pa.B. 922 (February 12, 1994)(Incorporation of the Department's Existing Wetlands Protection Program into Water Quality Standards Program)].*

4. The application states that the second pipeline will be 16 inches in diameter, while other applications related to this project state that the second pipeline could be up to 20 inches in diameter. Which is correct? *[25 Pa. Code §105.13(e)(1)(iii)(A)]*

5. List the types and amounts of emissions to satisfy question 13.0.1 of the General Information Form. *[1300-PM-BIT0001 5/2012 Instructions]*

6. The Application and GIF have different titles for M.L. Gordon. An application shall be signed by the owners of the dam or reservoir, water obstruction or encroachment, or the persons exercising primary responsibility for the dam or reservoir, water obstruction or encroachment. In the case of a partnership, one or more members of the partnership

authorized to sign on behalf of the entire partnership shall sign the application. In the case of a corporation, it shall be signed by the president, vice president or other responsible official empowered to sign for the corporation. Provide consistent titles for Mr. Gordon and demonstrate that he is authorized to sign the Application. *[25 Pa. Code §§105.13(i) and 25 Pa. Code §§106.12(f)]*

7. Provide a PNDI search clearance letter from the Pennsylvania Game Commission for threatened and endangered species under their jurisdiction. *[25 Pa. Code §§105.15(a), 105.14(b)(4), 105.16(c)(3)]*

8. 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 and areas necessary to construct the water obstructions and encroachments. *[25 Pa. Code §§105.13(e)(1)(x), 105.14(b)(5), 105.15(a), 105.14(b)(4)]*

9. The project description provided in the Cultural Resource Notice states that the second pipeline is to be installed within 5 years of the first pipeline. The project description provided in the application does not discuss this timeframe. Regarding this item: Revise the application to discuss if the pipelines will be installed at the same time, or on different schedules. *[25 Pa. Code §§105.13(e)(1)(iii)(A), 105.13(e)(1)(iii)(B), 105.301(7), 105.15(a), 105.14(b)(4), 105.18a, 105.21(a)(1), 105.13(e)(1)(ix)]*

    a. If the pipelines are proposed to be installed at separate times, revise the application to clearly indicate this, and to identify the permanent and temporary impacts from the second pipeline installation. Please be advised that if issued the permit may expire before construction is completed on any second line.

    b. If the pipelines are proposed to be installed at separate times, revise your alternatives analysis to evaluate the feasibility of installing the two pipelines concurrently with one another to avoid and minimize impacts.

    c. You may need to revise you fee calculation spreadsheets to account for the additional, temporary disturbance resulting from a second, separate installation.

    d. Your Erosion and Sedimentation Control Permit Application (ESG 05 000 15 001) should also reflect the two construction sequences if two separate construction periods are proposed.

10. Provide a detail that shows how flumes or other in-stream supports are used for temporary stream crossings as mentioned in the Temporary Stream Crossing detail and identify where each method will be used. *[25 Pa. Code §§105.13(g)]*

11. Provide site plans that depict proposed work for each ATWS within a floodway or floodplain. These plans should include at a minimum the duration of proposed activities, the expected layout, E&S controls, and size or quantity of materials or structures proposed. *[25 Pa. Code §105.13(e)(1)(i)(C)]*

12. A number of drawings in the package, for example the auger bore drawings, state that the plans are for permitting purposes only. The plans, specifications and reports in the application are part of a permit once a permit is issued and must be followed. Remove this language from the plans and provide final plans. *[25 Pa. Code §§105.13(e), 105.44(a)]*

13. The auger bore drawings reference cathodic protection being installed. Provide plans and/or details for any proposed cathodic protection and identify on the plans where and which type of cathodic protection is proposed to be installed. *[25 Pa. Code §§105.3(4), 105.11(a), 105.13(e)(1)(i)(C)]*

14. Where cathodic protection is proposed to be installed in wetlands or other areas where vegetation is proposed to be undisturbed or replanted, identify how this cathodic protection will be maintained and replaced without vegetative disturbance. *[25 Pa. Code §§105.15(a), 105.13(e)(1)(ix), 105.18a]*

15. For all Bore and HDD locations, identify where all pipe pull back, or assembly, or other areas where the pipe will be laid out, and where all construction and staging areas are located. Identify any temporary crossings or impacts for these areas to streams, wetlands, and floodways. Revise the application accordingly to include these impacts, including site-specific plans depicting the impacts and proposed temporary matting. *[25 Pa. Code §§105.13(e)(1)(i), 105.13(e)(1)(iii)]*

16. The site plan sheets and E&S plan sheets identify the floodway which appears to be measured from the centerline of the stream as opposed to measuring from the top of bank for the 50-feet assumed floodway boundary. Provide floodway boundaries on all plan drawings that adhere to the definitions in Chapter 105 by providing the FEMA mapped floodway boundary, in areas absent a FEMA mapped floodway, the floodway boundary measured 50 feet landward from the top of bank, or in areas absent a FEMA mapped floodway a floodway boundary with evidence provided that the assumed 50 feet floodway is not accurate. *[25 Pa. Code §§105.13(e)(1)(i)(A), 105.1]*

17. The Typical Wetland Crossing detail on the E&S plans indicates soil will be stockpiled in the wetland along the trench. Revise the detail to include a means of separating the stockpiled soil from the wetlands, such as geo-fabric and matting, to ensure that stockpiled soil will be completely removed and impacts will be minimized. *[25 Pa. Code §§105.423, 105.18a(a), 105.18a(b), 105.15(a), 105.14(b)(4), 105.14(b)(11), 105.14(b)(13)]*

18. The typical wetland crossing details shown on the E&S plans indicates trench breakers are to be installed in the trench in the wetlands; however it is not clear what trench breakers are or whether trench plugs are intended. Revise this detail to identify whether trench plugs are intended by this term or provide a detail for trench breakers. In addition, if trench plugs are proposed to maintain wetland hydrology, revise the detail to include trench plugs within the wetland for long wetland crossings and specify the distance increments. Furthermore, the E&S plan drawings depict trench plugs which are inconsistent with the detail. Revise the site plans to be consistent with the detail. *[25 Pa Code §105.18a(a)(1) & §105.18a(a)(3) & §105.18a(a)(4) & §105.18a(a)(5) & §105.18a(b)(2) & §105.18a(b)(3) & §105.18a(b)(4) & §105.18a(b)(5) & §105.15(a)(1) & §105.14(b)(4) & §105.14(b)(11) & §105.14(b)(13) & §105.13(e)(1)(i)]*

19. Installation of the trench plugs as depicted in the Trench Plug Detail 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 ending at the top of the bedding material. *[25 Pa. Code §§105.18a, 105.15(a)]*

20. The Typical Wetland Crossing detail on the E&S plans states that the detail does not apply to active cultivated or rotated cropland. Revise the detail to apply to all wetland crossings or provide a separate detail for wetland crossings in active cropland. *[25 Pa. Code §§105.18a, 105.15(a)]*

21. Provide a description of the expected duration each temporary stream crossing will remain in place. If the temporary stream crossing will be in place for greater than one year, then a risk analysis will be necessary. *[25 Pa. Code §§105.13(1)(iii)(A), 105.14(b)(1), 105.14(b)(3)]*

22. Identify the proposed provisions for shut-off in the event of break or rupture for each crossing. Provide locations and description of how this action will be completed in the event a break or rupture occurs. *[25 Pa. Code § 105.301(9)]*

General Application

23. The disturbance fee values listed on Part One Section A of the fees calculation worksheet are not summed correctly. Provide a worksheet with the correct values, and submit any difference in fees. *[25 Pa. Code §§105.13(c)(2)(iii)(A)]*

24. Provide county specific information within the project description. *[25 Pa. Code §§105.13(e)(1)(iii)]*

25. Amend Section C of the Application to identify the size of the proposed second pipeline. Other areas in the application indicate a 16-inch pipe is to be used, but Section C describes a pipe that is up to 20-inch diameter. *[25 Pa. Code §§105.13(e)(1)(iii)(A)]*

26. Section F of the Application indicates the professional engineer's seal and certification is N/A. Plans, specifications and reports accompanying applications for any water obstructions or encroachments which would pose a threat to human life or a substantial potential risk to property shall be affixed with seal and signature of a registered professional engineer. The seal and certification for Chapter 105 are provided in Tab 7. Remove the N/A label from Section F. *[3150-PM-BWEW0036A Rev. 3/2013 Instructions]*

27. Provide the letters of approval from Altoona Water Authority and Huntingdon Area Water and Sewage Authority and update Question 16.0.2 of the GIF. *[1300-PM-BIT0001 5/2012 Instructions]*

28. Provide a letter from the municipalities commenting on the analysis of the project's impact on the floodway delineation and water surface profiles. *[25 Pa. Code §§105.13(e)(1)(vi)]*

29. Regulations 25 Pa. Code Sections 265.51 and 265.56 listed on page 3 of the PPC Plan do not exist. Correct the PPC Plan to demonstrate proper compliance. *[25 Pa. Code §§105.21.(a)(1); §91.33(b)]*

General Plan and Impact Table

30. It appears that a water obstruction and encroachment permit may be required for the proposed water withdraws and discharges. *[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), 105.14(b)(6), 105.301(1), 105.301(7), 105.301(5), 105.301(3), 105.151(1), 105.151(3), 105.161(a)(3), 105.161(4)]*

    a. Provide plans and cross sections indicating pipe size, placement, and locations for all wetlands, streams, floodways and floodplains where the proposed water withdrawal and discharge piping is to be installed.

    b. Revise the impact tables to include these impacts.

    c. Provide a description and plans of how the water will be discharged or withdrawn, the discharge capacity, the withdraw rate, 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.

    d. Provide cross sections, profiles, and hydraulic analysis for all piping placed in existing stream culverts and along and within stream channels.

    e. Revise the Environmental Assessment to discuss the impact of the water obstructions

and water withdraws from the obstructions on the resources. Where approval is being obtained from the Susquehanna River Basin Commission (SRBC), provide approval from the SRBC for the water withdraws if available.

f. Provide documentation of submission of proposed water obstructions and encroachments for these activities to each jurisdictional agency (PHMC, USFWS, PFBC, PGC, DCNR) and provide clearance from these agencies.

31. Provide a registered professional engineer's seal and signed certification, in accordance with §106.12(g), which shall read as follows:

"I (name) do hereby certify to the best of my knowledge, information and belief, that the information contained in the accompanying plans, specifications, and reports has been prepared in accordance with accepted professional practice, is true and correct, and is in conformance with Chapter 106 of the rules and regulations of the Department of Environmental Protection."

If the seal/certification is submitted on a separate piece of paper, please have it refer specifically to the project name and application number shown above. Also, the seal shall be affixed on the cover page of the plan sheets. *[25 Pa. Code §§106.12(g)]*

32. Indicate the duration each temporary crossing is expected to be in place. *[25 Pa. Code §§105.13(1)(iii)(A)]*

33. There are certain portions of streams where the pipeline is located less than the minimum 25 feet away from the stream bank. These portions are near hard meanders thereby increasing the potential for exposure during stream migration. Identify and provide adequate erosion protection at these locations, or move the proposed pipes 25 feet away from the stream bank. Natural vegetative stabilization or natural stream design structures should be considered first to avoid and minimize impacts. *[25 Pa. Code §§105.314]*

34. It appears that the stream data sheets in the Aquatic Resource Report use different formats from one another for stream dimensions (bank width, water width, and water depth). Provide justification for why Streams S-BB104, S-BB106, and S-BB108 use the average widths of the streams. What are the widths of the streams at the proposed crossings? Provide a more accurate depiction of the stream width at the proposed crossings. *[25 Pa. Code §§105.13(e)(1)(i)(A)]*

35. It appears that the stream data sheets in the Aquatic Resource Report use different formats from one another for stream dimensions (bank width, water width, and water depth). Provide justification for why the low range was used for the bank width of Stream SBB97, while other streams use the average or the high range. Provide a more accurate depiction of the stream width at the proposed crossings. *[25 Pa. Code §§105.13(e)(1)(i)(A)]*

36. The Bank Width indicated on the Stream Data Sheet for S-Y1 appears to be incorrect. In addition, the Water Width is used as the bank tobank Width on Table 3; however, other streams use the bank width from the stream data sheets. Clarify this discrepancy. *[25 Pa. Code §§105.13(e)(1), 105.21(a)(1)]*

37. Information for Stream S-L49 is provided in the Aquatic Resources Report and shown on Sheet 2 of Tab 7A, but could not be found in Table 3 of Section 11. Update the table to include the missing information. *[25 Pa. Code §§105.13(e)(1)]*

38. Information for Stream S-Y4 is provided in the Aquatic Resources Report and shown on Sheet 7 of Tab 7A, but could not be found in Table 3 of Section 11. Update the table to include the missing information. *[25 Pa. Code §§105.13(e)(1)]*

39. Information for Stream S-BB105 is provided in the Aquatic Resources Report, but could not be found in Table 3 of Section 11 or Sheet 17 of Tab 7A. Update the table to include the missing information. *[25 Pa. Code §§105.13(e)(1)]*

40. Information for Stream S-L43 is provided in the Aquatic Resources Report and shown on Sheet 21 of Tab 7A, but could not be found in Table 3 of Section 11. Update the table to include the missing information. *[25 Pa. Code §§105.13(e)(1)]*

41. Table 3 indicates that the bank to bank width for Stream S-Y7 is 2 feet; however, the bank width on the Stream Data Sheet is 5 feet. Clarify this discrepancy. The length of centerline crossing cannot be less than the bank width. Correct any areas that depict the impacts to S-Y7 inconsistently. *[25 Pa. Code §§105.13(e)(1)]*

42. Table 3 indicates that the bank to bank width for Stream S-Y10 is 2 feet; however, the bank width on the Stream Data Sheet is 3 feet. Clarify this discrepancy. *[25 Pa. Code §§105.13(e)(1)]*

43. Table 3 indicates that the bank to bank width for Stream S-Y20 is 3 feet; however, the bank width on the Stream Data Sheet is 2 feet. Clarify this discrepancy. *[25 Pa. Code §§105.13(e)(1)]*

44. Table 3 indicates that the bank to bank width for Stream S-L33 is 7 feet; however, the bank width on the Stream Data Sheet is 8 feet. Clarify this discrepancy. *[25 Pa. Code §§105.13(e)(1)]*

45. Table 3 indicates that the bank to bank width for Stream S-M10 is 3 feet; however, the bank width on the Stream Data Sheet is 4 feet. Clarify this discrepancy. *[25 Pa. Code §§105.13(e)(1)]*

46. Table 3 indicates that the bank to bank width for Stream S-M2 is 3 feet; however, the bank width on the Stream Data Sheet is 2 feet. Clarify this discrepancy. *[25 Pa. Code §§105.13(e)(1)]*

47. Table 3 indicates that the bank to bank width for Stream S-K96 is 1.5 feet; however, the bank width on the Stream Data Sheet is 3 feet. Clarify this discrepancy. *[25 Pa. Code §§105.13(e)(1)]*

48. Table 3 indicates that the bank to bank width for Stream S-K87 is 7 feet; however, the bank width on the Stream Data Sheet is 5 feet. Clarify this discrepancy. *[25 Pa. Code §§105.13(e)(1)]*

49. Stream Data Sheets could not be located in the Aquatic Resources Report for Streams S-Y24 4, S-JH2, S-JH4, S-K92, S-KP3, S-L17, S-L45A, and S-M49. Provide any missing data sheets. *[25 Pa. Code §§105.13(1)(i)(A)]*

50. Chapter 106 Floodplain impacts are not identified for S-L46 on sheet 20 of Tab 7A. Provide plans correctly identifying the impacts to the floodplain. *[25 Pa. Code §§106.12(d)(2)]*

51. The site specific drawings reference "Stream Restoration" but no detail or plan for this stream restoration has been provided. Provide a plan for the stream restoration referenced in the site specific drawings. In addition, clarify if this will be utilized at additional stream crossings or not and identify the crossings where it will be utilized. *[25 Pa Code §§105.13(e)(1)(i)(G), 105.13(e)(1)(i)(C), 105.311(2), 105.15(a), 105.14(b)(4)]*

52. The plans indicate that Streams S-M2, S-M4, S-L16, S-L15, S-L13, S-L21, S-L51, S-L52, S-L53, S-Y19, S-JH2, S-BB106, S-BB97, S-L48, S-L42 within wetland L24, S-L25, S-M17, S-L34, S-M9, M11, S-M20, S-K82, S-K89, and S-K85 flow in and along and under the ROW and proposed pipelines and not across and immediately through them or start/end in the area of excavation for the pipes. The plans provided for S-M18 and S-M4 in Tab 7D do not adequately depict the existing or proposed conditions upon stream restoration. There are no site specific plans for S-M2, S-L16, or S-L15. Provide site-specific plans, cross sections, and profiles that adequately depict the existing and proposed conditions, stream bed, stream banks, limits of excavation, and methods for the stream restorations. *[25 Pa. Code §§105.13(e)(1)(i)(C), 105.13(e)(1)(i)(G), 105.301]*

53. The ATWS area in the floodway of Stream S-L30 on Sheet 36 of Tab 7A is designated for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to the stream. *[25 Pa. Code §§105.13(g)]*

54. The ATWS area in the floodway of Stream S-L45a on Sheet 21 of Tab 7A is designated

for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to the stream. *[25 Pa. Code §§105.13(g)]*

55. The ATWS area in the floodway of Stream S-M3 on Sheet 43 of Tab 7A is designated for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to the stream. *[25 Pa. Code §§105.13(g)]*

56. The ATWS area in the floodway of Stream S-Y22 on Sheet 3 of Tab 7A is designated for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to streams. *[25 Pa. Code §§105.13(g)]*

57. The ATWS area in the floodway of Stream S-Y23 on Sheet 4 of Tab 7A is designated for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to streams. *[25 Pa. Code §§105.13(g)]*

58. The ATWS area in the floodplain of Stream S-Y1 on Sheet 6 of Tab 7A is designated for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to streams. *[25 Pa. Code §§106.3(2)]*

59. The temporary access road that crosses the floodplain on Sheet 6 does not appear to be included in the calculations for temporary floodplain impacts. Provide an accurate value for the impacts within the floodplains where proposed activities will occur. *[25 Pa. Code §§106.(d)(2)]*

60. The ATWS areas in the floodways of Streams S-M21 and S-BB98 on Sheet 23 of Tab 7A are designated for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to streams. *[25 Pa. Code §§105.13(g)]*

61. Several streams will utilize Temporary travel lanes, but the temporary floodway impacts are listed as zero. Clarify these discrepancies. *[25 Pa. Code §§105.15(a), 105.21(a)(1), 105.13(e)(1)]*

62. The impact table identifies the acres of Permanent Impact for wetlands L31 and L32 inaccurately. Revise the impact table to identify the correct acres of impact. *[25 Pa. Code §§105.15(a), 105.21(a)(1)]*

63. Provide a site-specific auger bore drawing for the bore under Weller Road in the floodway of stream S-Y23. *[25 Pa. Code §§105.13(e)(1)(i), 105.301(3)]*

64. The site Specific Drawing S-Y3-C -101 is inconsistent with E&S Plan Sheet ES-3.10 and the HDD plan drawings and proposes different locations of the bore face, stream impacts, and E&S BMPs. Revise the plan drawings to be consistent and accurate. *[25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i), 105.301]*

65. The March 2016 Wetland Delineation Addendum delineates wetland Y7's Palustrine Forested (PFO) and Palustrine Emergent (PEM) boundaries differently than the July 2015 Aquatic Resources Report. The impact plan drawings utilize the more recent delineation; however, the E&S plans ES-3.11 and ES-3.12 and the HDD plan drawings utilize the July 2015 delineation. Revise the E&S and HDD plan drawings to depict the wetland accurately utilizing the March 2016 Wetland Delineation Addendum delineation. *[25 Pa. Code §§105.21(a)(1), 105.451, 105.13(e)(1)(i)(A), 105.13(e)(1)(x)(A)]*

66. The impact table does not identify any temporary impacts to wetland Y7. Revise the impact table to identify the temporary impacts to wetland Y7 from the proposed temporary access road and quantify the acre(s) of PFO and PEM wetland temporarily impacted. In addition, identify any acres of wetland conversion. *[25 Pa. Code §§105.15(a), 105.21(a)(1)]*

67. Revise the impact table to identify the linear feet and square feet of the temporary impact to streams S-Y7 and S-Y6 from the proposed temporary access road. *[25 Pa. Code §§105.15(a), 105.21(a)(1)]*

68. The E&S plan drawing E&S-3.21 depicts a temporary stream crossing of stream S-Y6 at approximately pipe station 7200+50 which does not cross the stream but rather depicts the edge of the matting overtop of the stream channel. This is inconsistent with the standard detail. Revise the plans to cross the stream as close to perpendicular as practicable and if the crossing remains as proposed, provide plans depicting how the crossing will be accomplished in this fashion. *[25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i), 105.313(b), 105.151(1)]*

69. Stream S-CC22 is identified as an UNT to Raystown Lake but flows into S-Y8 which is an UNT to James Creek. Revise and clarify the application to be consistent and accurate. *[25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i)(A)]*

70. The delineated boundaries on LK-2 are inconsistent with the open water visible on the aerial imagery on the plan drawings and on the contours on the plan drawings and the E&S plan drawings ES-3.22 and ES-3.23. Revise the delineation boundaries for LK-2 to be accurate and consistent on the plan drawings and revise the impact table to accurately reflect the proposed impacts. *[25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i)(A),*

105.13(e)(1)(x)(A)]

71. Revise HDD plan Drawings PA-HU-0047.0000-RD and PA-HU-0047.0000-RD-16 to include and depict the boundaries of wetland WL-JH2 and stream S-L45A and include a limits of disturbance which is consistent with the plan and E&S drawings. *[25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i)(C)]*

72. The impact table identifies that stream S-L45A will have a temporary impact; however, the site plan and E&S plan do not depict temporary impacts to this stream. Revise and clarify the application to be consistent and accurate. *[25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i), 105.15(a)]*

73. It appears that stream S-L30 continues and crosses the proposed access road identified on plan sheets 36 and 37 and E&S plan Sheet ES-3.60. No stream has been identified in the Aquatic Resource Report. Revise the application to identify this stream and if any water obstructions are proposed. If water obstructions or encroachments are proposed, revise the application accordingly to include them. *[25 Pa. Code §§105.13(e)(1)(i)(A), 105.13(e)(1)(iii), 105.21(a)(1)]*

74. The proposed route of the pipelines East of stream S-L26 and around stream S-CC10 is outside of the survey area of the Aquatic Resource Report and its Addendums. Provide an aquatic resource delineation and documentation that the area has been investigated for waters of the Commonwealth. *[25 Pa. Code §§105.13(e)(1)(x)(A), 105.451, 105.13(e)(1)(i)(A)]*

75. The *2016 PADEP Field Review Technical Memo*, dated May 12, 2016, and found in the Environmental Assessment, contains inaccurate statements regarding the site identified as Huntingdon #4. It states that DEP confirmed no wetland was present at the W46b site and that DEP determined that W46b does not meet wetland soil or hydrology criteria. While DEP was present at this general site location as mentioned in the Memo, Tetra Tech stated on-site that wetland W46b was never fully investigated likely because the islands were not accessible at that time. DEP stated that the area needed to have a wetland determination conducted for the islands in the creek to determine if wetlands are present, and Tetra Tech and RETTEW proceeded to conduct a wetland determination on the islands in the Aughwick Creek and W46b area. DEP did not accompany Tetra Tech and RETTEW into this area and remained further back above the east bank of the creek. In addition, the wetland W46b data sheet states that only the outermost area of W46b was delineated and documents that wetland hydrology, soils, and vegetation criteria were met. This area was not looked at during the on-site meeting. Therefore, while the plans have removed all wetlands from this area, it appears a wetland is present in the area somewhere. Provide a revised wetland delineation for this entire area, including data sheet(s) for the islands in Aughwick Creek and a verification of the W46b data sheet with discussion and revised delineation mapping. *[25 Pa. Code §§105.13(e)(1)(i)(A),*

105.13(e)(1)(x)(A), 105.451, 105.21(a)(1)]

76. Provide profiles for the temporary crossings identified in the E&S plan that depict at a minimum the existing conditions and the proposed conditions. Also, provide information regarding the length of time that all temporary crossings will be in place. Some of the plans appear to use unnatural stream contours upon restoration. Identify the aggregate and the typical timber mat crossing being used. *[25 Pa. Code §§105.13(e)(1)(i)]*

77. Revise plan sheet 44 to identify the FEMA floodplain boundaries for stream S-K94. *[25 Pa. Code §§105.13(e)(1)(i)(A)]*

78. The plans indicated on E&S plan ES-3.73 that stream S-K94, which is 20-feet wide, will be temporarily crossed with timber mats. Explain how timber mats will be utilized to construct a temporary bridge of this length. *[25 Pa. Code §§105.13(e)(1)(iii)(A)]*

79. The ATWS area on plan sheet 45 appears to include wetland K71. However, the plan is not of a sufficient scale to depict whether wetland K71 will be impacted or not, and E&S plan sheet ES-3.74 does not contain all of the ATWS area on it. Revise the plan and/or E&S plan to clearly depict this area in the floodway of stream S-K96 and that wetland K71 will not be impacted. *[25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i)]*

80. Stream S-L16 is depicted on E&S plan sheet ES-3.78 as being crossed by a temporary timber mat at the same location as a proposed gas line. Explain how this will occur and provide additional plan sheets to show stages of construction if necessary. *[25 Pa. Code §§105.13(e)(1)(i), 105.13(e)(1)(iii)(A), 105.21(a)(1)]*

81. Revise the impact table to separately identify the impact from the proposed travel lane on wetlands K67 and K68 and streams S-K90, S-K9, and S-K93. It is unclear if the proposed impacts are permanent or temporary, clarify if the proposed impacts are permanent or temporary and identify the purpose of the travel lane. *[25 Pa. Code §§105.13(e)(1)(i), 105.13(e)(1)(iii), 105.15(a), Environmental Assessment Form Instructions]*

82. It appears the temporary impacts to stream S-K83 from the temporary ROW could be avoided. Revise the application to avoid the temporary impacts to this stream or revise the alternatives analysis to discuss in detail why the temporary workspace is necessary. Note: the E&S plan ES-3.84 does not depict any water obstructions or encroachments in the stream in this temporary ROW. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7)]*

83. Stream S-Y11 is identified as perennial draining into stream S-Y10, ephemeral. This appears to be inconsistent. Please clarify if stream S-Y10 is perennial, ephemeral, or needs partially re-classified. *[25 Pa. Code §§105.21(a)(1), 105.15(a), 105.14(b)(4)]*

84. The following streams start and/or end within the aquatic resource survey area and/or proposed ROW and the plan maps, photographs or narrative do not give justification, or appear to depict why they start/end: S-Y21, S-Y20, S-BB104, S-KP3, S-M28, S-L37, S-L36, S-L34, S-M13, S-L25, S-L21, and S-K89. Revise the application to explain their start/end points, at a minimum, within the entire survey area, and ensure that the floodways and proposed floodway impacts are fully identified and depicted. Provide color photographs which depict the resource and surrounding area sufficiently, including photographs of start/end locations. *[25 Pa. Code §§105.13(e)(1)(i)(A), 105.13(e)(1)(iv)]*

85. Wetland M3 is identified on the impact table, and identified and depicted impact plan drawing sheet 43, as being open cut and stream S-M3 is identified as the floodway being bored. However, the E&S plan sheet ES-3.71 and bore plan drawing PPP-PA-HU-0102.000-RD depict that stream S-M3 and wetland M3 will be bored and the floodway of S-M3 will be bored and partially open cut for bore pits. Revise and clarify the plans and impact tables to be accurate and consistent. *[25 Pa Code §§105.21(a)(1), 105.15(a), 105.13(e)(1)(i)]*

86. The site impact plan sheet 23, E&S plan sheet ES-3.37, site specific drawing S-BB7-C-101, and Bore drawing PPP-PA-HU-0047.012-RD all depict different proposed impacts, construction techniques, and BMPs. Revise the application to provide plan drawings which are all consistent and accurate, depict the same proposed impacts, and revise the impact table accordingly to accurately identify the proposed impacts. *[25 Pa Code §§105.21(a)(1), 105.13(e)(1)(i), 105.15(a)]*

87. It appears based on the contours that stream S-M9 continues to the East and that the floodway is proposed to be impacted. However, the delineation and floodway are not depicted farther to the East. Revise the application to delineate this stream farther downstream in the area and depict the floodway on the plans. Revise the application accordingly to include any additional impacts. *[25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1), 105.15(a)]*

88. Stream S-BB97 is proposed to be bored, and wetland BB127 is proposed to be both bored and open cut, according to the Bore plan drawing PPP-PA-HU-0047.012-RD. It appears all of wetland BB127 could be bored to further minimize impacts. Revise the application to bore all of wetland BB127. If this is not practicable, revise the alternatives analysis to provide detailed documentation and evidence as to why this wetland cannot be bored. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a(b)(2), 105.18a(b)(3)]*

89. The site specific plan drawing S-BB97-C-101 depicts trench plugs within the area proposed to be bored. Revise the application to clarify how trench plugs are to be installed along the bore path of streams S-BB97 and S-M21 and wetland BB127. *[25 Pa. Code §§105.14(b)(4), 105.13(e)(1)(i)(C), 105.301(10), 105.15(a)]*

90. The E&S plan drawing ES-3.37 depicts proposed temporary matting in wetland BB127 north of the proposed pipelines while the site specific plan depicts temporary matting south of the proposed pipelines. Revise and clarify the site plans to be accurate and consistent. *[25 Pa. Code §§105.13(e)(1)(i), 105.21(a)(1)]*

91. It appears the temporary ROW proposed in wetland BB127 may not be necessary if all of the wetland is bored. Revise the application to remove the temporary ROW and temporary impacts to wetland BB127. Alternatively if this is not possible or practicable, provide detailed documentation and evidence explaining why it is necessary and that it cannot be further avoided and minimized. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a(b)(2), 105.18a(b)(3)]*

92. It appears the road adjacent to wetland M8 is proposed to be bored. Clarify if the road is proposed to be bored, and identify the bore pits on the plan drawings. It appears impacts to wetland M8 could be further minimized by incorporating it into the bore. Revise the application to include boring under wetland M8 and if this is not practicable, revise the alternatives analysis to provide detailed documentation and evidence as to why this is not a practicable alternative to further avoid and minimize impacts. *[25 Pa. Code §§105.13(e)(1)(i), 105.14(b)(7), 105.18a(b)(3)]*

93. It appears the road adjacent to wetland K72 and stream S-K96 is proposed to be bored. Clarify if the road is proposed to be bored, and identify the bore pits on the plan drawings. It appears impacts to wetland K72 and stream S-K96 could be further minimized by incorporating them into the bore. Revise the application to include boring under wetland K72 and stream S-K96 and if this is not practicable, revise the alternatives analysis to provide detailed documentation and evidence as to why this is not a practicable alternative to further avoid and minimize impacts. *[25 Pa. Code §§105.13(e)(1)(i), 105.14(b)(7), 105.18a(b)(3)]*

94. It appears the road adjacent to stream S-K88 is proposed to be bored. Clarify if the road is proposed to be bored, and identify the bore pits on the plan drawings. It appears impacts to wetland K66 and stream S-K88 could be further minimized by incorporating them into the bore. Revise the application to include boring under wetland K66 and stream S-K88 and if this is not practicable, revise the alternatives analysis to provide detailed documentation and evidence as to why this is not a practicable alternative to further avoid and minimize impacts. *[25 Pa. Code §§105.13(e)(1)(i), 105.14(b)(7, 105.18a(b)(3)]*

95. Table 3 identifies the Bank to Bank Width for stream S-L29 as 200 feet; however, it also identifies the Length of Centerline Stream Crossing at HDD/Bore as 148. These are inconsistent at the length of the pipeline crossing cannot be less than the bank to bank width. Revise and clarify the impact table to be consistent and accurate with the plans. *[25 Pa. Code §§105.15(a), 105.21(a)(1)]*

96. Streams S-Y2, S-Y3, S-Y5, S-Y6, S-Y7, S-Y8, S-Y9, S-Y10, S-Y11, S-Y12, and S-Y13 are identified incorrectly and they are UNTs to the Raystown Branch of the Juniata River, not James Creek. Revise the application accordingly. *[25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1)]*

97. Raystown Lake or UNTs to Raystown Lake are not identified as streams in 25. Pa. Code Chapter 93. Revise the following streams to be identified as UNTs to Raystown Branch of the Juniata River: S-Y14, S-Y15, S-Y16, S-CC18, S-Y17, S-Y18, S-Y19, and S-Y20. *[25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1)]*

98. Raystown Lake, identified as LK-2, is identified on Table 2, Wetland Impact Summary. However, this is also the Raystown Branch of the Juniata River. Revise the application to identify it as both Raystown Lake and the Raystown Branch of the Juniata River, and identify the Chapter 93 stream designation (WWF, MF) on Table 3. *[25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1), 105.15(a)]*

99. The following streams are identified as UNTs to Trough creek when they are UNTs to Little Trough Creek: S-BB104, S-BB108, S-BB106, and S-KP3. Revise the application to identify the streams correctly. *[25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1)]*

100. The waterbody identified as Pond-I4 is an online pond with an UNT to Little Trough Creek flowing through it. Revise the application to identify that it is also an UNT to Little Trough Creek and identify the Chapter 93 Designated use. *[25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1)]*

101. Stream S-L46 is identified as Trough creek when it is actually Little Trough Creek. Revise the application accordingly to correctly identify this stream as Little Trough Creek. *[25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1)]*

102. Revise the plan drawings to depict the mapped FEMA Floodplain at the following stream crossings: S-M21, S-M16, S-L40, Access Road South of S-L30, S-K89, and S-K90. *[25 Pa. Code §§105.13(e)(1)(i)(A)]*

103. Revise the application plans to include all avoidance and minimization measures for identified species of concern associated with water obstructions and encroachments from the Pennsylvania Game Commission, Pennsylvania Fish and Boat Commission, Pennsylvania Department of Conservation and Natural Resources, and the U.S. Fish and Wildlife Service. Ensure any seed mixtures, matting, or other specified items are included in the plans and/or E&S plans. In addition, revise the Environmental Assessment to discuss the avoidance and minimization measures and clearances received. *[25 Pa. Code §§105.15(a), 105.14(b)(4), 105.16(c)(3)]*

104. The E&S plan details for temporary stream crossings and plan drawings state timber mats or a temporary equipment bridge may be utilized, but only depicts a timber mat bridge. Provide details for the proposed temporary equipment bridge(s) which depict the size shape, and span of the structure. Provide separate details depicting the timber mat and other bridge structure crossing's cross sections. In addition, revise the E&S plan and/or other plan drawings to identify the method of each temporary stream crossing proposed at each location. *[25 Pa. Code §§105.13(e)(1)(C), 105.13(e)(1)(i)(G), 105.13(e)(1)(iii)(A), 105.151(1), 105.21(a)(1)]*

105. Trench plugs are proposed to be located at wetland/upland interfaces. Additional trench plugs may be necessary along the length of the crossing due to the length and/or slope to maintain hydrology throughout the wetland. Review and revise the application and plans accordingly. Some additional guidance is available in the PA E&S Control BMP Manual. *[25 Pa. Code §§105.13(e), 105.18a]*

106. Temporary road stream crossing details utilizing culverts are provided on E&S plans ES-0.09 and ES-0.11; however, the E&S plans and impact plans do not identify that any of these crossings are to be used. Revise the E&S plans to remove these proposed crossing methods if not proposed to be utilized, or identify where the proposed crossing methods will be utilized. *[25 Pa. Code §§105.13(e)(1)(i)(C), 105.151(1), 105.21(a)(1), 105.13(e)(1)(iii)(A)]*

107. Revise the stream Bank Restoration Detail to clearly indicate that the existing bank slope and grade and elevation are to be restored, to identify a biodegradable erosion control blanket to be utilized, and to specify the native plantings to be used. In addition, some stream banks are likely to be a-typical, like vertical banks, or very low banks, or eroding banks. Provide plans and details for how banks of a-typical conditions will be restored. *[25 Pa. Code §§105.13(e)(1)(i)(G), 105.13(e)(1)(ix), 105.1, 105.13(e)(1)(x), 105.15(a)(1), 105.14(b)(4), 105.16(d)]*

108. 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 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, 105.13(e)(1)(x), 105.15(a)(1), 105.14(b)(4), 105.16(d)]*

109. Provide site specific cross sections for the streams and wetlands which depict the existing and proposed conditions of the streams and wetlands, proposed pipes and depths, the existing stream bed and banks dimensions. *[25 Pa. Code §§105.13(e)(1)(i)(G), 105.14(b)(4), 105.301(3), 105.301(4), 105.301(5)]*

110. The Mitigation Plan states that the excavated stream banks will be reseeded; however the E&S detail for bank restoration does not indicate this. Revise the Bank Restoration Detail to be consistent and include the native seeding mixture to be utilized. *[25 Pa. Code §§105.13(e)(1)(ix), 105.14(b)(4), 105.21(a)(1)]*

111. Multiple streams which begin within the proposed ROW or immediately adjacent to it are proposed to be crossed by the proposed pipelines. Revise the application to discuss and provide plans outlining how source(s) of the streams will be protected and maintained. Revise the Environmental Assessment and Mitigation Plan to discuss the impacts to the streams both within the ROW and the downstream affects to the resources and properties. Provide compensatory mitigation for streams in which flow will be adversely affected. Provide this information for the following streams, at a minimum: S-L51, S-Y21, S-Y7, S-Y9, S-Y12, S-M48, S-BB104, S-KP3, S-L48, S-M28, S-BB97, S-L34, S-M11, S-L21, S-L16, and S-K89. *[25 Pa. Code §§105.13(e)(1)(ix), 105.13(e)(1)(x), 105.14(b)(4), 105.14(b)(12), 105.14(b)(3), 105.15(a)(1), 105.16(d)]*

112. The application contains HDD Inadvertent Return Contingency Plans in multiple sections of the application, such as the Mitigation Plan and different species conservation plans. However, the Contingency Plans are not all consistent in terms of agency notifications, and the PAFBC Law Enforcement is not identified as being notified as required in the PAFBC PNDI clearance letter. Also, the HDD table is not included in all versions of the Contingency Plan. Revise the HDD Inadvertent Return Contingency Plans to all be consistent, including the appropriate jurisdictional agencies, and provide documentation that revised plans have been sent to all jurisdictional agencies. *[25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(ix), 105.14(b)(4)]*

a. Provide information/details on previous HDD activities on the prior Mariner East pipeline project where IRs occurred. At a minimum this should include, a topographic map with locations and latitude/longitude of each occurrence, description of event, amount of discharge, whether the discharge entered waterways and/or wetlands, mitigation/clean-up measures taken, etc.

b. A stand-alone attachment should be created to address the pre-boring geologic evaluation of the existence and potential to impact local drinking water supplies or aquifers around the boring location. The plan needs to include what measures will be employed to verify that no supplies or aquifer are impacted (i.e. pre and post water quality and quantity analysis). The plan should specify what notifications and remediation measures will be employed if there are impacts.

113. Agency notification should occur when inadvertent returns happen in any water resource, not just bog turtle areas. Correct the HDD Inadvertent Return Contingency Plan to reflect proper notifications. *[25 Pa. Code §§105.14(b)(4)]*

114. The following wetlands are identified in the application as Exceptional Value (EV) due to Wild Trout: W332, W333, K63, K65, K66, K67, K68, L7, L8, and L9. However, the department was unable to determine wild trout status for the adjacent streams or tributaries thereto. Clarify and revise the application accordingly. *[25 Pa Code §105.13(e)(1)(x)(B) & §105.17(1)(iii) & §105.21(a)(1)]*

115. Revise the application to clarify if the exceptional value wetland analysis included all factors listed in 25 Pa Code §105.17(1). If the analysis did not consider all factors, revise it to analyze all factors and update the application. *[25 Pa. Code §§105.13(e)(1)(x)(B), 105.17(1)]*

116. Revise impact Table 3 and the impact plans to correctly identify whether streams are wild trout or not. As presently proposed, no wild trout streams are proposed to be impacted by the project. *[25 Pa. Code §§105.21(a)(1), 105.15(a)]*

117. The Mitigation Plan states that for HDD crossings, a telemetry guidance system will be used.

a. Revise the application to identify what type of telemetry guidance system will be utilized; specifically if it will utilize cables, wires, or other obstructions placed or strung across waters of the Commonwealth. *[25 Pa. Code §§105.13(e)(1)(iii), 105.13(e)(1)(i), 105.301(7)]*

b. If cables, wires, or other obstructions will be utilized across waters of the Commonwealth revise the application to identify these temporary impacts, include them in the impact tables, provide plan drawings and cross sections depicting the obstructions, and provide information on the purpose, function, and length of time they will be installed. *[25 Pa. Code §§105.13(e)(1)(i), 105.301(3), 105.301(5), 105.15(a), 105.13(e)(1)(iii)]*

c. If cables or other obstructions are proposed over streams, an Aids-To-Navigation (ATON) Plan may be required by the PA Fish and Boat Commission; therefore, if cables or other obstructions are proposed, provide approved ATON plans and approvals and/or documentation from the PA Fish and Boat Commission documenting where ATON plans are not applicable. Contact Thomas Burrell with the Pennsylvania Fish and Boat Commission at 717.705.7838 regarding ATON requirements. *[25 Pa. Code §§105.14(b)(6), 105.21(a)(2), 105.14(b)(2)]*

118. The impacts described under Section 5.0 of the Mitigation Plan are inconsistent with the impacts provided in the impact tables in the Environmental Assessment. Revise this inconsistency to state the correct impact totals throughout the application. *[25 Pa. Code §§105.15(a), 105.21(a)(1), 105.13(e)(1)(i)(ix)]*

119. Provide information about the pump size, flow rate, and duration of use for those open cut crossings (dry crossings) that will use the typical bypass pump-around method. Provide justification for why larger streams do not utilize the proposed flume option. How will aquatic life be able to pass throughout the stream safely? *[25 Pa. Code § 105.401(4), 105.13(g)]*

120. The application states that the period of instream work to install the proposed pipeline(s) will be less than 24 hours in minor waterbodies and 48 hours for crossing of "intermediate" (10-30' across) waterbodies. Describe how these timeframes coincide with the hydrostatic testing procedures outlined in the project description. Do the trenches remain open during testing? To facilitate the further understanding of your project, revise your application to discuss the estimated time installation will take in crossings of wetlands and larger watercourses. *[25 Pa. Code § 105.13(e)(1)(iii)]*

Environmental Assessment

121. Provide an assessment of the functions and values of any additional Exceptional Value wetlands and wetland with impacts over 1 acre. *[25 Pa. Code §§105.13(e)(3), 105.15(a)]*

122. Enclosure C of the Environmental Assessment discusses the various sections in terms relative to the existing pipeline ROW; however, the proposed ROW does not fully overlap the existing ROW but abuts/parallels the existing ROW. Revise Enclosure C to discuss the functions, habitat, and other factors in Enclosure C outside of the existing ROW and in areas of proposed impact and the overall resources. *[25 Pa. Code §§105.13(e)(1)(x), 105.15(a), 105.14(b)(4)]*

123. 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. Locate the public drinking water supplies in the vicinity of the proposed pipeline. 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)]*

    a. Upon identification of public drinking water supplies, revise questions 14.0, 15.0, and 16.0 of the General Information Form accordingly. *[General Information Form Instructions]*

b. Upon identification of public drinking water supplies, revise the Environmental Assessment Form and associated enclosures accordingly to discuss the resources and impacts from water obstructions and encroachments on the public water supplies. *[25 Pa. Code §§105.15(a), Environmental Assessment Form Instructions]*

c. Upon identification of public drinking water supplies, revise the Alternatives Analysis and Mitigation Plan accordingly to avoid and minimize impacts to public water supplies and provide a detailed discussion on alternative routes, designs and methods documenting that there is no practicable alternative to further avoid and minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.13(e)(1)(ix), 105.14(b)(5)]*

124. The application does not identify if the resources proposed to be affected are part of or located along a private water supply, including surface and groundwater sources. Revise the application and the Environmental Assessment to identify if any of the proposed resources are part of or located along a private water supply. *[25 Pa. Code §§105.15(a), Environmental Assessment Form Instructions]*

a. If private water supplies are identified, revise Enclosures C and D of the Environmental Assessment to identify them and discuss the impacts on them from the proposed water obstructions and encroachments.

b. Provide procedures that will be followed to investigate and resolve impacts to private water supplies should they occur as a result of the proposed activities. These procedures should discuss, at a minimum, how private water supply owners will be alerted in the event of an inadvertent return and how impacts will be resolved and/or mitigation.

125. Section F, Attachment 11, EA Form, Page 2, item 7 states, "Is the water resource part of or located along a private or public water supply?" The Applicant checked "No". However, no documentation validating this statement is provided in the application. The Department is concerned that private and perhaps public water supply wells are located along crossed stream and wetland water resources and/or along the length of the HDD operations. The applicant needs to propose measures to protect all water uses, both surface intakes and groundwater sources, located along and/or downstream of the proposed work areas. Special attention needs to be applied to the potential unplanned impacts that HDD and inadvertent releases (IR) may have on groundwater sources. In addition, where a structure or activity is in a wetland, the applicant must demonstrate that this project will not cause or contribute to the pollution of groundwater or surface water resources or diminution of resources sufficient to interfere with their uses, including use as a public or private water supply. Your assessment needs to include identification, notification and consultations with water suppliers and/or well owners. A notification contact list needs to be included in your PPC Plan and Inadvertent Release Plan. *[25 Pa Code §105.13; §105.14(b)(4); §105.14(b)(5); §105.18a(5); §105.18a(b)(5); §91.33(b)].*

126. Revise Enclosures C & D to discuss the watercourses and wetlands proposed to be impacted and the impacts on them, and not discuss the impacts in general terms of the overall project or general type of impacts. *[25 Pa. Code §§105.13(e)(1)(x), §105.15(a)]*

127. 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), and Environmental Assessment Instructions]*

128. Revise section D.1 of Enclosure C of the Environmental Assessment to accurately identify that the proposed project will cross State Game Lands 73/118 and 420, but not 198. *[25 Pa. Code §§105.15(a), 105.21(a)(1), 105.13(e)(1)(x), 105.14(b)(5)]*

129. Revise Section B.1 of Enclosure C of the Environmental Assessment to remove reference to Clover Creek which is not proposed to be impacted and/or is not in Huntingdon County. *[25 Pa. Code §§105.15(a), 105.21(a)(1)]*

130. Revise Enclosure C of the Environmental Assessment to remove reference to wild trout streams since no wild trout streams are proposed to be impacted in Huntingdon County. *[25 Pa Code §§105.15(a), 105.21(a)(1)]*

131. Revise Section D of Enclosure C of the Environmental Assessment to identify the recreation in the Raystown Lake National Recreation area. *[25 Pa. Code §§105.15(a), 105.21(a)(1), 105.13(e)(1)(x), 105.14(b)(5)]*

132. Update and revise section A.3 of Enclosure D of the Environmental Assessment to discuss any avoidance and minimization measures relative to clearance for the Pennsylvania Historical and Museum Commission. *[25 Pa. Code §§105.13(e)(1)(x), 105.15(a), 105.14(b)(5), Environmental Assessment Form Instructions]*

133. Revise Enclosure D of the Environmental Assessment to discuss the impacts on the Game Lands and the Raystown Lake National Recreation Area crossed in Huntingdon County by the Water Obstructions and Encroachments, and provide documentation of coordination and approval from the Pennsylvania Game Commission and the U.S. Army Corps of Engineers. As necessary, provide any supporting documentation and/or coordination materials for the approval from the Game Commission and the Army Corps of Engineers. *[25 Pa. Code §§105.13(e)(1)(x), 105.15(a), 105.14(b)(5)]*

134. Section A.3 of Enclosure D of the Environmental Assessment identifies the Allegheny Portage Railroad of the Pennsylvania Canal in Cumberland County, when it is located in Blair County. Revise this section to be accurate. *[25 Pa. Code §§105.13(e)(1)(x), 105.21(a)(1), 105.15(a), 105.14(b)(5)]*

135. Revise section B.4 d. of Enclosure D of the Environmental Assessment to discuss specific hiking trails which will be temporarily closed and identify their locations within the project boundary. If hiking trails within the project boundary are associated with proposed water obstructions or encroachments, provide a discussion on the impact to the trail, the length of time it is proposed to be closed, plans for signage and detours, and correspondence from any agencies or trail organizations regarding coordination of the closure. *[25 Pa. Code §§105.13(e)(1)(x), 105.21(a)(1), 105.15(a), 105.14(b)(5)]*

136. 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. Discuss how the minimization measures would affect preserved farms and how they will be affected, such as not being able to replant an orchard or vineyard. *[25 Pa. Code §§105.13(e)(1)(x), 105.15(a), 105.14(b)(5), 105.14(b)(4), Environmental Assessment Form Instructions]*

137. Enclosure C of the Environmental Assessment mentions that the project crosses the Tussey Mountain Important Bird Area (IBA), but Enclosure D does not discuss the impacts that water obstructions or encroachments may have on this area. Revise Enclosure D of the environmental assessment to discuss the impacts the proposed water obstructions and encroachments will have on this area. In addition, identify if/how the recommendations in the USFWS letter dated June 24, 2016, are being addressed. *[25 Pa Code §§105.13(e)(1)(x), 105.14(b)(4), 105.14(b)(5), 105.15(a)]*

138. Revise Section B.1.c. of Enclosure D of the Environmental Assessment to discuss, any avoidance and minimization measures, and committing to implementing them. It currently states that clearances are being worked on. *[25 Pa. Code §§105.15(a), 105.14(b)(4), 105.21(a)(1)]*

139. Enclosure C of the Environmental Assessment identifies Biological Diversity Areas and Landscape Conservation Areas within the project area; however, Enclosure D does not discuss potential impacts to these areas. Revise Enclosure D to discuss potential impacts to these areas from the proposed water obstructions and encroachments. *[25 Pa. Code §§105.15(a), 105.14(b)(4)]*

140. 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]*

141. Revise the description of wetland functions and values to not only include the principle functions and values, but all the functions and values the wetlands provide. *[25 Pa. Code §§105.13(e)(2), 105.14(b)(13), 105.15(a)]*

142. Based on the information in the application, it is apparent that wetland functions and values are present in multiple wetlands which have not been identified in the functions and values assessments and descriptions table (ex. wildlife habitat, groundwater discharge/recharge, flood flow alteration, and nutrient removal). Based on the information provided, the functions and values have been applied inconsistently across the wetlands. Re-evaluate and revise the functions and values assessments and descriptions for all wetlands. *[25 Pa. Code §§105.13(e)(2), 105.13(e)(3), 105.14(b)(13), 105.15(a), 105.18a(a)(1), 105.18a(b)(1), 105.14(b)(4)]*

143. Two different wetland function and evaluation forms have been provided for wetland L8 Revise and clarify the application to be accurate and consistent. *[25 Pa. Code §§105.13(e)(3), 105.15(a), 105.21(a)(1)]*

144. Wetlands are located in mapped soils with shallow bedrock and restrictive soil layers (i.e. fragipans), and the application's data sheets and functions and values assessment identifies shallow rock layers, shallow bedrock, and/or restrictive soil layers are present. Also, based on the functions and values descriptions wetlands may contain groundwater discharges, such as springs or may be concave and not connected to groundwater.

    a. For each wetland to be impacted, identify the locations of restrictive layers which contribute to and/or maintain the wetlands' hydrology. *[25 Pa. Code §§105.15(a), 105.13(e)(1)(x), 105.14(b)(4), 105.14(b)(13), 105.18a(a), 105.18a(b)]*

    b. Identify and provide a discussion on any potential permanent impacts to wetland hydrology from excavation or alteration from construction of the proposed project. Provide a plan, plan sheets, cross sections, and other details which demonstrate that impacts to the wetlands' hydrology from alteration of restrictive layers have been avoided and minimized. *[25 Pa. Code §§105.15(a), 105.13(e)(1)(x), 105.14(b)(4), 105.14(b)(13), 105.18a(a), 105.18a(b)]*

    c. Wetlands W-Y13, W-L17, and W-L16 contain/may contain open water/seasonal inundation, based in the information provided in the application. Provide site specific information on the hydrology and soils and data on why the wetlands maintain open water/seasonal inundation and provide site specific construction plans, cross sections, and restoration details to ensure that the hydrology and functions and values of the wetland is not altered and it continues to maintain inundation and seasonal hydrology. *[25 Pa. Code §§105.13(e)(1)(x), 105.14(b)(4), 105.14(b)(13), 105.15(a), 105.18a(a)(1), 105.18a(a)(3), 105.18a(a)(4), 105.301(4), 105.301(5)]*

145. Revise the Environmental Assessment to discuss the impacts to each wetland where a vegetative class change is proposed (ex. PFO to PSS). The discussion should be specific to the wetland and its functions and values. *[25 Pa. Code §§105.14(b)(4), 105.14(b)(13), 105.14(b)(11), §105.15(a), 105.18a(b), 105.18a(a)]*

146. The HDD Inadvertent Return Contingency Plan includes profiles identifying Geotechnical profiles; however, no analysis has been provided on the risk of an inadvertent return occurring. Provide an analysis on the risk of an inadvertent return occurring for proposed HDD crossings of Exceptional Value and High Quality Streams, Class A Wild Trout waters, streams and wetlands which are inhabited by threatened or endangered species, streams and wetlands where inadvertent returns have previously occurred, crossings of streams and wetlands adjacent to or located along public water supplies, and streams with karst geology. In addition, provide the analysis for Raystown Lake due to its size. Include in-depth detail, discussion, and data in the analysis of the risk of a return occurring. *[25 Pa. Code §§105.14(b)(7), 105.18a(b)(3), 105.18a(b)(4), 105.18a(b)(5), 105.14(b)(4), 105.14(b)(11)]*

147. Revise Enclosures C&D to assess and discuss the condition of and impacts to forested and scrub shrub riparian areas. Revise the enclosures to discuss the primary impacts and secondary impacts, as well as consideration of antidegradation on watercourses for each watercourse crossing from the riparian vegetation impacts. *[25 Pa. Code §§105.15(a), 105.13(E)(1)(x), 105.14(b)(4), 105.14(b)(11), 105.14(b)(12), 105.14(b)(14)]*

a. In general, the Department 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. *[25 Pa. Code §§105.15(a), 105.13(E)(1)(x), 105.14(b)(4), 105.14(b)(11), 105.14(b)(12), 105.14(b)(14), Riparian Forest Buffer Guidance, Document # 394-5600-001]*

b. To avoid and minimize the impacts to the watercourses, provide a plan to replace the vegetation lost in both permanent and temporary ROW and workspaces. Alternatively, where it cannot be replaced and provided protection from clearing during the proposed project's operation and maintenance, provide an explanation as to why it cannot be replaced. *[25 Pa. Code §§105.15(a), 105.13(E)(1)(x), 105.14(b)(4), 105.14(b)(11), 105.14(b)(12), 105.14(b)(14), 105.1, 105.14(b)(7)]*

c. Revise the application plan drawings and project description to clearly and specifically state if vegetation clearing, cutting, removal, or other alteration is proposed as part of the proposed projects' construction, operation, and maintenance. Revise the plan drawings to clearly indicate all locations where maintenance clearing, cutting, removal, or other alternation is not part of proposed maintenance activities. *[25 Pa. Code §§105.13(e)(1)(ix), 105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.11(d)]*

148. To aid in evaluating the condition of and change in condition to watercourses and wetlands as discussed in other comments, 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. These protocols are not for identifying the functions and values of the resources, but rather are utilized to assess the current and proposed conditions of the resources. *[25 Pa. Code §§105.14(a), 105.14(b)(4), 105.14(b)(13), 105.14(b)(12), 105.15(a), 105.13(e)(1)(x)]*

149. Section B.2.a of Enclosure D of the Environmental Assessment states the natural drainage patterns of the wetlands and small or headwater streams will be maintained. However, no information has been provided or detailed contours or cross sections depicting the drainage patterns, cross section, or what the drainage patterns are in the wetlands in their existing conditions. Explain how the final "restored" wetland elevations and natural drainage patters of wetlands and streams will be determined. *[25 Pa. Code §§105.13(e)(1)(x), 105.14(b)(4), 105.14(b)(11), 105.15(a), 105.18a(a), 105.18a(b)]*

Mitigation Plan/Environmental Assessment

150. The Mitigation Plan appears to indicate that streams and wetlands which will be crossed by HDD are not proposed to have vegetative impacts either during construction or during operation and maintenance of the proposed pipelines. However, it is unclear on the plan drawings and in the application narrative precisely if vegetation cutting, clearing, removal, or grubbing is or is not part of the proposed construction, operation, and maintenance. Where Horizontal Directional Drill (HDD) and Bore crossings of resources are proposed a Permanent Easement is identified and impacts are identified as permanent only for the pipe size itself, and at other resource crossings a permanent ROW is identified and impacts are identified as permanent for the entire ROW. No explanation has been provided in the application for this different nomenclature.

a. Revise the application plan drawings and application narratives, including but not limited to the project description and mitigation plan, to clearly and specifically state if vegetation clearing, cutting, removal, or other alteration is or is not proposed as part of the proposed projects' normal construction, operation, and maintenance. *[25 Pa. Code §§105.13(e)(1)(ix), 105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.11(d)]*

b. Revise the plan drawings to clearly indicate all locations where maintenance clearing, cutting, removal, or other alternation is not part of proposed maintenance activities.*[25 Pa. Code §§105.13(e)(1)(ix), 105.13(e)(1)(i), 105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.11(d)]*

c. If construction, normal operation, or normal maintenance activities will require the clearing, cutting, removal, or other alteration of the vegetation in or adjacent to the wetland and streams the application must be revised to identify and discuss in detail the primary impacts and secondary impacts to these resources from the proposed project. The application's Environmental Assessment should be revised to discuss the resources and the impacts thereto. Compensatory mitigation may be necessary and required to compensate for impacts to these resources from these impacts. *[25 Pa. Code §§105.15(a), 105.13(e)(1)(x), 105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.14(b)(11), 105.13(e)(1)(ix), 105.15(a), 105.18a(a), 105.18a(b)]*

151. The Mitigation Plan implies through mention of "No Mow" signs that PSS and PFO wetlands which will be crossed by open cut methods are not proposed to have vegetative impacts after they are re-vegetated following construction during the operation and maintenance of the proposed pipelines. However, it is unclear on the plan drawings and in the application narrative precisely if vegetation cutting, clearing, removal, or grubbing is or is not part of the proposed operation, and maintenance of the proposed pipelines.

a. Revise the application plan drawings and application narratives, including but not limited to the project description and mitigation plan, to clearly and specifically state if vegetation clearing, cutting, removal, or other alteration is or is not proposed as part of the proposed projects' normal construction, operation, and maintenance. *[25 Pa. Code §§105.13(e)(1)(ix), 105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.11(d)]*

b. Revise the plan drawings to clearly indicate all locations where maintenance clearing, cutting, removal, or other alternation is not part of proposed maintenance activities.*[25 Pa. Code §§105.13(e)(1)(ix), 105.13(e)(1)(i), 105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.11(d)]*

c. If construction, normal operation, or normal maintenance activities will require the clearing, cutting, removal, or other alteration of the vegetation in or adjacent to the wetlands the application must be revised to identify and discuss in detail the primary impacts and secondary impacts to these resources from the proposed project. The application's Environmental Assessment should be revised to discuss the resources and the impacts thereto. Compensatory mitigation may be necessary and required to compensate for impacts to these resources from these impacts. *[25 Pa. Code §§105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.15(a), 105.11(d), 105.13(e)(1)(ix), 105.18a(a), 105.18a(b)]*

152. The Mitigation Plan and Environmental Assessment state that conversion of Palustrine Forested Wetlands (PFO) is proposed to occur, that there will be a functional loss, but the loss is de minimus.

a. Revise the Mitigation plan to replant the PFO wetlands in the permanent and temporary ROW with native trees if possible, and if not possible provide specific details and documentation on why this is not possible. *[25 Pa. Code §§105.13(e)(1)(viii), 105.1, 105.14(b)(4), 105.14(b)(13), 105.18a(a), 105.18a(b)]*

b. Based on the Mitigation Plan, PSS wetlands are acceptable in the permanent ROW. Therefore, if replanting of PFO wetlands in the permanent or temporary ROW is not possible, revise the mitigation plan to replant converted PFO wetlands in the ROW with shrubs. *[25 Pa. Code §§105.13(e)(1)(viii), 105.1, 105.14(b)(4), 105.14(b)(13), 105.18a(a), 105.18a(b)]*

c. The application does not evaluate the cumulative conversion of PFO wetlands for the entire project. The applications for Blair, Huntingdon, Juniata, Perry, Cumberland, York, Dauphin, Lebanon, Lancaster, and Berks Counties within the Department's Southcentral Region propose a conversion on approximately 0.528 acres of PFO wetlands. Based on the Department's review of the impacts for PFO wetlands, compensatory mitigation is required to offset the identified PFO functional impacts of conversion to PSS. Revise the application to assess the impact to the effected forested wetlands, evaluate the cumulative effect on all counties of the proposed project, and provide compensatory replacement for the lost functions and values. *[25 Pa. Code §§105.13(e)(1)(ix), 105.13(e)(1)(viii), 105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.15(a), 105.18a(a), 105.18a(b), 105.20a(a)(2)]*

153. The application states that temporarily impacted Palustrine Scrub Shrub (PSS) and PFO wetlands will be replanted with native trees and shrubs, PSS wetlands in the permanent ROW will be planted with wetland shrubs, and PFO wetlands in the permanent ROW will be allowed to revert to PSS/PEM wetlands. Provide planting plans and details for these areas and for the replanting of PFO areas in the permanent and temporary ROWs. The planting plans must identify the locations of the plantings and wetlands, the species to be planted, the planting density, the proposed size of the plantings, planting timing, goals and objectives for success, and a monitoring plan to ensure re-establishment. *[25 Pa. Code §§105.13(e)(1)(ix), 105.18a(a),105.18a(b), 105.20a]*

154. Section 2.2.2.1 of the Mitigation Plan, Construction in Wetlands with Unsaturated Soils, conflicts with the rest of the application, which identifies that all wetland crossings will be crossed with mats or pads. Crossing unsaturated wetlands without timber mats would contribute to soil compaction, rutting, and disturbance of the cut vegetation's roots. Therefore, revise the Mitigation Plan to identify that all wetland crossings shall use mats or pads. *[25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(ix), 105.15(a), 105.18a(a), 105.18a(b)]*

155. Section 2.2.2.1 of the Mitigation Plan identifies that wetlands will be reseeded with a

native wetland seed mixture; however, the mixture is not specified nor is it proposed on the plans. Revise the application to identify the seed mixture to be used and revise the E&S plans to indicate its use for wetland restoration in the Typical Wetland Restoration detail. *[25 Pa. Code §§105.13(e)(1)(ix), 105.14(b)(4), 105.14(b)(13)]*

156. The HDD list at the end of the Inadvertent Return Contingency Plan in the Mitigation Plan identifies HDD crossings with notes as "Drive Through – Travel Only" which are not identified on the plan drawings or applications as being "Drive Through – Travel Only". Revise this information to be accurate and consistent with the rest of the application. *[25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i), 105.13(e)(1)(iii)]*

Alternatives Analysis

157. The Alternatives Analysis states that the Alternatives Analysis is meant to be a summary of major actions taken to avoid/minimize impacts. The Alternatives Analysis must be a detailed analysis of alternatives, including alternative locations, routings, or designs to avoid or minimize adverse impacts and document and provide evidence that there is no practicable alternative which would not involve a wetland or that would have less adverse impact on a wetland. In addition, for the project to be water dependent as stated in the Alternatives Analysis, it must be based on the demonstrated unavailability of any alternative route location, or design or use of location, route or design to avoid or minimize adverse impacts. Revise the Alternatives Analysis to provide a detailed analysis of alternative routings, locations, and designs to avoid and minimize impacts and provide detailed documentation and evidence that there are not practicable alternatives which would further avoid and minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a(a)(2), 105.18a(a)(3), 105.18a(b)(2), 105.18a(b)(3)]*

In addition, address the following specific comments regarding the Alternatives Analysis:

a. The Alternatives Analysis states that the proposed project was co-located within an existing pipeline for the majority of the route. However, multiple deviations away from the existing Sunoco pipeline occur within Huntingdon County and no information, details, or documentation on why the route deviated away from the existing ROW was given, or on alternate route selection to avoid and minimize impacts. Provide a detailed alternatives analysis which contains evidence and documentation on potential and avoided impacts for the existing alignment, proposed alignment, and other potential route alignments which documents that impacts cannot be further avoided and minimized. The following route alignments in Huntingdon County have been identified which deviate widely from the existing Sunoco ROW: The stream S-L51 to Raystown Road route deviation; and the steam S-L57 to stream S-L16 route deviation. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a(a), 105.18a(b), 105.14(b)(4), 105.14(b)(5), 105.14(b)(13)]*

b. Revise the Alternatives Analysis to discuss, evaluate, and provide a detailed analysis on alternative routes to avoid and minimize impacts to High Quality Streams and watersheds.*[25 Pa. Code §§105.14(b)(7), 105.13(e)(1)(viii)]*

c. Revise your alternatives analysis to discuss routing alternatives that were considered as alternatives to impacts Exceptional Value wetlands. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a(a)]*

d. Some portions of the proposed ROW and pipelines directly abuts the maintenance corridor of the existing Sunoco pipeline; however, in other portions the proposed ROW has partial or near complete overlap with the existing maintenance area and pipeline. No discussion on this is provided in the alternatives analysis, and it appears that more overlap of the proposed ROW and the existing Sunoco Maintenance corridor is practicable and would further avoid and minimize impacts. Revise the application accordingly to avoid and minimize impacts by locating the proposed ROW within the overlap of the existing maintenance corridor, or provide a detailed analysis and discussion with specific details explaining why this overlap is present in some areas and not others, and why the proposed ROW cannot further overlap. *[25 Pa. Code §§105.14(b)(7), 105.13(e)(1)(viii), 105.18a(a), 105.18a(b)]*

d. It appears that several waters of the Commonwealth could be crossed using trenchless installation methods. Revise the application accordingly, or provide a revised alternatives analysis that incorporates a discussion of alternative crossing techniques (conventional bore, HDD, micro-tunneling, etc.) that includes documentation and evidence addressing each resource crossing and explaining why trenchless installation methods are not appropriate. *[25 Pa. Code §§105.14(b)(7), 105.18a(b)(3), 105.18a(a)(3), 105.13(e)(1)(viii)]*

e. The Alternatives Analysis in Route Variation 6 identifies that the pipeline has been re-routed to avoid installation of the pipes paralleling down the middle of the stream. Other stream impacts are proposed where the proposed pipes will parallel down the stream channel, where the stream flows in and along the pipes and ROW, and where streams begin within the proposed ROW; however, no information has been provided on why these impacts cannot be avoided and/or minimized through route changes. It appears that many of these areas can have impacts further avoided and minimized. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs, and methods to avoid and minimize impacts and which documents and provides evidence that other routes and designs would not further avoid or minimize impacts for the following streams: S-M2, S-L16, S-L15, S-L13, S-L21, S-L51, S-L52, S-L53, S-Y19, S-JH2, S-BB106, S-L48, S-L42 within wetland L24, S-L25, S-M17, S-L34, S-M9, M11, S-K82, and S-K85 S-M18, S-M20, S-M4, S-BB97, S-M22, S-K89, and S-K8. *[25 Pa. Code §§105.14(b)(7), 105.14(b)(4), 105.14(b)(11), 105.15(a)]*

f. It appears that impacts to wetland Y14 could be avoided and minimized by re-locating the alignment to the North. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]*

g. It appears that secondary impact to stream S-Y3 could be avoided and minimized by lengthening the HDD location and beginning it further to the East and lengthening the "Permanent Easement (no surface disturbance)". Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7)]*

h. It appears that impacts to streams S-Y5, S-Y6, S-Y7 and wetlands Y6, Y7, and CC28 could be avoided and minimized by locating the proposed pipelines further North. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7)]*

i. It appears that impacts to wetland Y12 and streams S-Y19 and S-JH2 could be avoided and minimized by locating the proposed pipelines to the Southeast. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]*

j. It appears that impacts to wetland L28 could be avoided by relocating the proposed pipelines to the North or the South. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]*

k. It appears, but is not described in the application, that HDD was assumed by the applicant to be the crossing method presenting the least potential impact to water resources and aquatic species. Revise the alternatives analysis to provide justification for the selection of which water resource (streams and wetlands) crossings will be

made by HDD. *[25 Pa. Code §§105.14(b)(7), 105.18a(b)(3), 105.18a(a)(3), 105.13(e)(1)(viii)]*

l. It appears that primary impacts and secondary impacts from the Temporary ROW and ATWSs can be avoided by locating them outside the floodway of streams. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7)]*

m. It appears that locating the pipelines to the South would avoid impacts to streams S-L45, S-L42, wetland L21, and Pond I4. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]*

n. It appears that primary impacts and secondary impacts could be avoided and minimized by locating the proposed pipelines South of stream S-M28, and if this is not practicable, minimize impacts by crossing it farther downstream/Northeast in a perpendicular fashion. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7)]*

o. It appears that impacts to streams S-M20 and S-M18 and wetlands M17 and M15 could be avoided and minimized by relocating the proposed pipelines to cross the streams farther upstream and in a more perpendicular fashion to rejoin Sunoco's existing ROW farther West. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]*

p. It appears that impacts to wetlands M12 and CC27 can be avoided and minimized by locating the proposed pipelines on the North side of the Existing Sunoco pipeline. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]*

q. It appears that impacts to wetland L12 could be avoided or minimized by locating the proposed pipelines South of the existing Sunoco pipeline. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]*

r. It appears that impacts to wetlands K72 and L10 and stream S-L21 and the floodway of stream S-K96 could be avoided and minimized by locating the proposed pipelines South of the existing Sunoco pipeline. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]*

s. The following pertain to the Alternatives Analysis' for wetlands L7, L8, L9,W332, and W333.The analysis states that an alignment further South or North than that proposed would increase undisturbed forest habitat including potentially other streams/wetlands. The proposed re-route around wetland L7 will require additional forest clearing, and no justification and documentation has been provided on why it is practicable in this instance and not in the rest. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. This should include specific details and quantification which documents that other routes and designs would not further avoid or minimize impacts .*[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]*

   i. It appears that relocating the proposed pipelines' alignment North of wetland L8 and/or North of stream S-L16 could avoid and minimize impacts and cross S-L16 in a more perpendicular manner.

   ii. It appears that locating the proposed pipelines South of the existing Sunoco Pipeline from the point West of wetland L6 where the proposed pipelines rejoin the existing through stream crossing S-L13 could avoid wetland impacts and avoid and minimize stream impacts and cross the streams in a more perpendicular manner.

t. The Alternatives Analysis states that a combination of open cutting and HDD was determined to be the most feasible alternative for crossing wetlands K67 and K68; however, no details, documentation, or evidence has been provided on why this is the least damaging practicable alternative. It appears that lengthening the HDD to cross

both wetland K67 and K68 and not open cut wetland K67 would further minimize impacts. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. This should include specific details and quantification which documents that other routes and designs would not further avoid or minimize impacts*[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a]*

u. Stream K-89 starts at its source between the two proposed pipelines. Also, based on the provided photograph, it appears the stream has at least intermittent if not perennial flow. Revise the stream flow regime accordingly. It appears relocating the proposed pipelines to the North could avoid this impact. Revise the application accordingly to avoid and minimize impacts, and provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impact. *[25 Pa Code §§105.14(b)(7), 105.14(b)(4), 105.13(e)(1)(viii), 105.16(a), 105.16(d)]*

   i. If the impact cannot be avoided, provide a detailed discussion, assessment, and analysis on the existing hydrology and on the impacts to the proposed stream and how it will be restored. The analysis should specifically discuss the source of hydrology for the stream and how it will be restored after the pipelines are installed, include a geologic analysis on the impact to the stream hydrology if the source is emanating from the bedrock, and include a plan to monitor the stream post construction. *[25 Pa Code §§105.16(a), 105.15(a), 105.13(e)(1)(ix)]*

   ii. If impacts to the hydrology will result and/or hydrology lost from the proposed impacts, provide a detailed plan for compensatory mitigation for these impacts. *[25 Pa Code §§105.13(e)(1)(ix), 105.1, 105.16(a)]*

e. The Alternatives Analysis discussion on alternatives to avoid and minimize impacts for wetlands K65 and K66 by shifting the pipelines North or South would cause more disturbance of previously undisturbed habitat, including potentially other wetlands and streams. However, no information or detail has been provided on whether the possibility of alternatively shifting the alignment North or South will actually impact any additional wetlands and streams or increase the quantity of impacts. Revise the alternatives analysis to include specific details and quantification providing a detailed analysis of alternative routes, designs and methods to avoid and, minimize impacts to wetlands and streams which documents that other routes and designs would not further avoid or minimize impacts. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a]*

Other

149. If any changes to the proposed route occur, revise all parts, components of the application to reflect these changes. This includes providing copies of the submission to and clearance from the PHMC, USFWS, PFBC, DCNR, and PGC. *[25 Pa. Code §§105.13(e)(1), 105.21(a)(1)]*

158. Provide consistent and up-to-date plans to the Department and Penn, Shirley, Union and Tell Townships. *[25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) § 105.13(e)(1)(i)(A) and (C)]*

159. Please respond to and address the comments from the Pennsylvania Fish and Boat Commission found on the attached sheet. Due to the number of crossings and time-of-year restrictions, the Department recommends identifying the time-of-year restrictions on the plans. *[25 Pa. Code §§105.14(b)(4), 105.14(b)(6)]*

You must submit a response for each of the above deficiencies. You may request a time extension, in writing, before November 7, 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).

DEP has developed a standardized review process and processing times for all permits or other authorizations that it issues or grants. Pursuant to its Permit Review Process and Permit Decision Guarantee Policy (021-2100-001), DEP guarantees to provide permit decisions within the published time frames, provided applicants submit complete, technically adequate applications/registrations that address all applicable regulatory and statutory requirements, in the first submission. Since you did not submit a complete and/or technically adequate application, DEP's Permit Decision Guarantee is no longer applicable to your application.

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 November 7, 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 Herman Jackson at 717.705.4814 and Andrew McDonald at 717.705.4776 and refer to Application No. E07-459 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 (Attach: PAFBC comments and eMapPA Instructions)

cc: Brad Schaeffer, Tetra Tech, Inc.
U.S. Army Corps of Engineers, Baltimore District – Debby Nizer
Pennsylvania Fish and Boat Commission, Division of Environmental Services
Pennsylvania DEP, Southwest Regional Office, Waterways and Wetlands Program
Pennsylvania DEP, Southeast Regional Office, Waterways and Wetlands Program
Huntingdon County Conservation District
Huntingdon County Planning Commission
Penn Township
Shirley Township
Union Township
Tell Township