



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. E21-449  
APS No. 879354  
Lower Mifflin, Upper Frankford, Lower Frankford, North Middleton, Middlesex, Monroe, Silver  
Spring, Upper Allen, Lower Allen Townships, Cumberland 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. Antidegradation 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-foot 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. Provide county specific information within the project description. [25 Pa. Code §§105.13(e)(1)(iii)]

24. How were the disturbance fees calculated? Neither the summation of Temporary disturbance on Tables 2, and 3 nor the summation of Permanent disturbance equate to the values presented at the end of Table 1 (from Tab 7A) and reported on the fees calculation worksheet. Clarify this discrepancy. *[25 Pa. Code §§105.13(c)(2)(iii)(A)]*
25. Provide letters of approval from North Middleton Water Authority, Middlesex Municipal Water Authority, United Water of PA, and PA American Waters in order to satisfy Question 16.0.2 of the GIF and coordinate with the Department's Water Supply and Watershed Management Programs. *[25 Pa. Code §§105.21(a)(1)]*
26. 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)]*
27. Attachment 1 of Tab 1 indicates that the construction contractor is to finalize contracts with the Public Water Supplies. Explain what this statement means and provide the proper coordination to satisfy Questions 14.0 through 16.0.2 of the GIF. *[General Information Form 1300-PM-BIT0001 5/2012]*
28. 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]*
29. 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 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 (PHMC, USFWS, PAFBC, PGC, DCNR) agency and provide clearance from these agencies

#### General Plan and Impact Table

30. Sheet 4 of Tab 7A does not depict enough information to determine if Stream S-I86 is impacted by the project. There is a stream data sheet provided, but the stream is not listed in Table 3 of Tab 11. *[25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(i)(A) and (C)]*
31. The following items pertain to inconsistencies with stream resource identification. *[25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(A)]*
  - a. The bank to bank width for Stream S-K1 is 3 feet in Table 3; however, the stream data sheet in the aquatic resources report lists it as 2.5 feet. Provide the width of the stream at the crossing.
  - b. S-BB19 lists bank to bank width in Table 3 as 8 feet, but the stream data sheet indicates 6-10 feet. Provide the width of the stream at the crossing.
  - c. S-BB20 lists bank to bank width in Table 3 as 6.5 feet, but the stream data sheet indicates 5-8 feet. Provide the width of the stream at the crossing.
  - d. Table 3 of Tab 11 lists the bank to bank width of S-J37 as 15 feet; however, the stream data sheet identifies the bank width as 45 feet. Clarify this discrepancy.
  - e. Table 3 of Tab 11 lists the bank to bank width of S-J36 as 15 feet; however, the stream data sheet identifies the bank width as 45 feet. And the water width is listed as 10 feet while Sheet 16 of Tab 7A indicates the OHW is 15 feet. Clarify these discrepancies.



- f. S-BB100 lists bank to bank width in Table 3 as 3 feet, but the stream data sheet indicates 3-5 feet. Provide the width of the stream at the crossing and explain the use of the lower range as the bank width.
- g. There are two stream data sheets for S-I75. What is the purpose of these two different documents? Which of these represents the values listed in Table 3 of Tab 7A?
- h. Stream S-I57 lists the bank to bank width in Table 3 of Tab 11 as 12 feet; however, the stream data sheet indicates a bank width of 25 feet. Clarify this discrepancy.
- i. Table 3 of Tab 11 indicates that bank to bank width of Stream S-BB10 is 12 feet, but the stream data sheet identifies a bank width of 12 inches. Correct the table to reflect the proper width.
- j. Stream S-BB7 lists bank width as 5 feet, but stream data sheet indicates 4-6 feet. What is the width at the crossing?
- k. Stream S-BB5 lists bank width as 3 feet, but the stream data sheet indicates 6-36 inches. What is the width at the crossing, and why use the higher value for stream width?
- l. Information for Stream S-J12 could not be found in Table 3. There is not sufficient detail for S-J12 on Sheet 34 to determine if there are impacts to the stream. Provide the missing information.
- m. There are two stream data sheets for S-J7. Which of these represents the stream crossing on Sheet 35 of Tab 7A? Provide the relevant information.
- n. There is no information on Table 3 for Stream S-J8, nor is there sufficient information shown on Sheet 35 of Tab 7A to determine if there are impacts to the stream. Provide the missing information.
- o. There is no information on Table 3 for Stream S-J6, nor is there sufficient information shown on Sheet 35 of Tab 7A to determine if there are impacts to the stream. Provide the missing information.
- p. There is no information on Table 3 for Stream S-J4, nor is there sufficient information shown on Sheet 35 of Tab 7A to determine if there are impacts to the stream. Provide the missing information.

- q. The stream data sheet for S-I48 does not indicate a water width. What was used to determine the impacts to Stream S-I48?
  - r. Stream S-BB83 lists bank width as 12 feet, but the stream data sheet indicates 4-12 feet. What is the width at the crossing, and why use the higher value for stream width?
  - s. Stream S-BB101 lists bank width as 13.5 feet in Table 3, but the stream data sheet indicates 12-15 feet. Why use the average? What is the width of the stream at the crossing?
  - t. Stream Data Sheets for S-I77 and S-I90 could not be found. Provide the missing information.
  - u. Temporary impacts for Stream S-I89 on Sheet 3 are shown as zero; however, there is a temporary travel lane crossing the stream. Correct the submission to reflect the proper impacts.
  - v. There is not sufficient information on sheet 4 for S-I86 to determine if the project impacts the stream. Provide a better depiction of this stream.
  - w. Should S-K14 have a site specific?
  - x. There is not sufficient information for S-I82 on Sheet 9 of Tab 7A to determine impacts. Provide a better depiction of this stream. Provide a better depiction of this stream.
  - y. There is not sufficient information for S-I84 on sheet 10 to determine if the temporary access road impacts the stream. Provide a better depiction of this stream.
32. The proposed gas lines are installed via open cut through a length of Stream S-K2 (instead of perpendicular to it) and is not a typical crossing. Provide a site specific drawing in Section 7D for this atypical stream crossing. [25 Pa. Code § 105.21(a)(1), 105.13(e)(1)(i)(C)]
33. 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)]

34. Sheet 8 identifies ATWS in proximity to S-K5 designated for spoil. Deposition of materials is an encroachment and is not waived by Chapter 105. [25 Pa. Code § 105.12(a)(2)]
35. Sheet 14 of Tab 7A shows temporary right-of-way within the floodway of S-BB120; however, the inset indicates no temporary floodway impacts. Correct the submission to reflect the proper amount of temporary impacts. [25 Pa. Code § 105.13(e)(1)(i)(C)]
36. Provide a detail for the proposed water withdrawal on Sheet 16 S-J36. [25 Pa. Code § 105.21(a)(1), 105.13(e)(1)(i)(C)]
37. Identify how the stream impact of 1,170 ft<sup>2</sup> was calculated for S-J37 on sheet 16. [25 Pa. Code § 105.13(e)(1)(i)(C)]
38. ATWS in the floodplain and floodway of Stream S-I69 on Sheet 21 of Tab 7A is designated for spoil, but spoil location in conjunction with E&S controls is not provided. Identify measures to minimize accelerated erosion to protect surface waters. [25 Pa. Code § 105.13(g)]
39. Upland ATWS on Sheet 23 of Tab 7A does not have associated E&S measures. Identify measures to minimize accelerated erosion to protect surface waters. [25 Pa. Code § 105.13(g)]
40. ATWS on Sheet 27 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. Identify measures to minimize accelerated erosion to protect surface waters. [25 Pa. Code § 105.13(g)]
41. Why is an additional 5 feet of right-of-way required at locations where the proposed pipelines parallel the existing maintenance corridor? This is not reducing/minimizing impacts. Adjust the submission to demonstrate how the project minimizes adverse environmental impacts. [25 Pa. Code § 105.13(e)(1)(viii)]
42. The 100 year floodway is depicted differently on ES-4.71 and Sheet 44 of Tab 7A. Clarify this discrepancy and correct any reported impacts. [25 Pa. Code § 105.13(e)(1)(i)(A), 105.13(g), 105.21(a)(1)]

43. Trindle Spring Run, which has approximately 0.5 of a square mile drainage area adjacent to the PA Turnpike is not sufficiently identified on Sheet 49 of Tab 7A. Demonstrate why the submission lists S-I46 as a waived stream. *[25 Pa. Code § 105.13(e)(1)(i)(A)]*
44. Sheet 59 of Tab 7A indicates no temporary floodway impacts to Stream S-I41; however, temporary right-of-way is shown on the plan sheet. Clarify this discrepancy. *[25 Pa. Code § 105.13(e)(1)(i)(C)]*
45. Fertig Road is not identified on ES-4.21 or 4.22. Provide a site plan that identifies existing roads and other manmade features. *[25 Pa. Code § 105.13(e)(1)(i)(C), 105.21(a)(1)]*
46. The water withdrawal proposed for S-J15 on Sheet 31 of Tab 7A (the Conodoguinet Creek) requires a Submerged Lands License Agreement. Submit the required information to begin the SLLA process. *[25 Pa. Code § 105.31(c)(2)]*
47. The Submerged Lands License Agreement for Conodoguinet Creek (S-I53) identifies a 50-foot permanent right-of-way; however, Sheet 32 of Tab 7A only depicts a Permanent Easement. Correct the plan sheets, impacts tables, and fees calculation worksheet to reflect the right-of-way licensed by the SLLA. *[25 Pa. Code § 105.13(e)(1)(i)(C)]*
48. The Submerged Lands License Agreement for Conodoguinet Creek (S-I53) indicates the crossings will be two parallel 20-inch lines; however, the project description and permit submission indicate one 20-inch line and one 16-inch line. Correct the submission to reflect the pipelines licensed by the SLLA. *[25 Pa. Code § 105.13(e)(1)(iii)(A)]*
49. The Submerged Lands License Agreement for Conodoguinet Creek (S-I53) indicates a crossing length of 130 feet; however, at a minimum, Table 3 of Tab 11, Sheet 32 of Tab 7A, and the HDD plan and profile views for the crossing demonstrate a 196 foot crossing. Correct the submission to reflect the crossing length licensed by the SLLA. *[25 Pa. Code § 105.13(e)(1)(i)(C)]*
50. Floodplain impacts are not identified for Stream S-BB83 on Sheet 37 of Tab 7A. Provide the missing information. *[25 Pa. Code §§ 105.13(e)(1)(i)(A) and (C), 106.11(a)]*
51. 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)]*

52. 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]*
53. 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)]*
54. The plans indicate that Streams S-J43, S-K4, S-K2, S-K1, S-I75, S-I76, S-I65, S-I59, S-J13, S-H70, S-BB40, and S-H69 flow in and along and under the ROW and proposed pipelines and not across and immediately through them. The plan provided for S-K4 in Tab 7D do not adequately depict the existing or proposed conditions upon stream restoration or excavation limits. The E&S plans do not provide sufficient detail on the stream limits, banks, excavation limits, etc. 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), 105.311(2)]*
55. The ATWS area 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)]*
56. There are plan sheets in Tab 7A with streams that do not show enough information beyond the temporary right-of-way (ie. Floodway delineation, stream orientation, and hydrologic connections) to properly evaluate the proposed impacts. Provide a better depiction of the streams outside of the proposed temporary rights of way. *[25 Pa. Code §§105.13(e)(1)(i)(A)]*

57. Provide color photograph(s) of Pond-J4 which clearly depict the resource, and indicate on the plans the location and orientation of the photograph(s). *[25 Pa. Code §§105.13(e)(1)(iv)]*
58. The impact plans and E&S plan drawings do not depict what impacts are proposed to Pond-J4. The E&S plan sheet ES-4.04 depicts that timber mats end prior to the pond, and that the pond may need to be partially impacted by temporary a temporary crossing(s). Revise the plans to clearly depict the proposed impacts. *[25 Pa. Code §§105.13(e)(1)(i)(C), 105.21(a)(1)]*
59. The site plan drawing, sheet 4, does not fully depict the proposed impact to wetland I62 because it is covered by text information. Revise this plan drawing to clearly depict this impact. *[25 Pa. Code §§105.13(e)(1)(i)(C), 105.21(a)(1)]*
60. Streams S-K14 and S-K6 have secondary channels which depart/re-join from each other within the proposed ROW. Provide site specific plan drawings depicting the existing and proposed conditions, stream banks, temporary crossings, temporary pump bypasses, and limits of excavation. *[25 Pa. Code §§105.13(e)(1)(iv), 105.301(1), 105.301(3)]*
61. Temporary timber mat crossing is proposed across wetland I61; however, it appears that this can be avoided by accessing the site in the temporary ROW South of the wetland. Revise the application to avoid the temporary impacts to this wetland or revise the alternatives analysis to discuss in detail why the temporary workspace is necessary. *[25 Pa Code §105.13(e)(1)(viii) & §105.14(b)(7) & §105.18a(a) & §105.105.18a(b)]*
62. It appears the temporary impacts to stream S-I85 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-4.51 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)]*
63. The site specific drawing S-K4-C-101 depicts the temporary stream crossing of S-K4 with timber mats protruding halfway into stream S-K4. This appears impractical to install. Explain how this will be accomplished, and if the crossing will occur in a different manner or with different obstructions, provide detailed plans for the temporary crossing. *[25 Pa. Code §§105.13(e)(1)(i)(C), 105.13(e)(1)(i)(G), 105.151(1)]*
64. Based on the aerial photography and the photographs provided it appears that stream K1 and/or wetland K1 are not accurately delineated in the Aquatic Resources Report and plan drawings. The photographs provided appear to indicate that wetland K1 continues to and possibly through stream S-K1. In addition, the sharp meander depicted in S-K1 on the plans is not evident on aerial photographs, the provided photographs, and crosses upslope

- contours and trees. Also, S-K1 continues downstream within the survey area; however, it is not delineated fully within the survey area. Revise the Aquatic Resource Report, and application to accurately delineate wetland K1 and stream S-K1 and account for the accurate proposed impacts. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1)]
65. Revise the Auger Bore Drawing PPP-PA-CU-0051.0000RD to clearly depict the stream banks of stream S-BB119. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.301(1)]
  66. The site plans indicate that wetland W177 and stream S-BB120 will be open cut to install the pipelines and not installed by HDD. However, the E&S plan sheets ES-3.21 and ES-3.22 indicate the stream and wetland have the pipelines installed by HDD. In addition site specific HDD plans are provided for this area. Revise the application to be accurate and consistent in what the proposed impacts are and to avoid and minimize impacts. [25 Pa. Code §§105.13(e)(1)(i)(C), 105.21(a)(1)]
  67. The HDD plan drawings PA-CU-0053.0000RD and PA-CU-0053.0000RD-16 depict a conservation easement on wetland W177 and stream S-BB120. Revise the environmental assessment to identify what the easement is and the impact of the proposed water obstruction and encroachments on this easement. [25 Pa. Code §§105.15(a), 105.14(b)(4), 105.14(b)(5)]
  68. Revise the impact table to separately identify the impact from the proposed travel lane on wetlands J40, I63, J35, and J31; and streams S-I89, S-I88, S-J41, S-J37, S-J36 and S-J34. It is unclear if the proposed impacts are permanent or temporary. The travel lane and its temporary impacts are located outside of the Permanent Easement area, but no temporary impacts are identified in the impact table. 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)]
  69. Revise Impact Table 3 to clearly identify that stream S-J37 is proposed to be crossed twice in two locations by the proposed pipelines and the travel lane. [25 Pa. Code §§105.15(a), *Environmental Assessment Instructions*]
  70. Revise all plan drawings to include the FEMA floodplain boundary in the area of E&S plan sheet ES-4.27 and wetland BB151. [25 Pa. Code §§105.13(e)(1)(i)(A)]
  71. Revise all plan sheets to include the FEMA mapped floodplain boundary for stream S-I89. [25 Pa. Code §§105.13(e)(1)(i)(A)]
  72. The wetland delineation for wetland BB151 appears that it may be inconsistent with the wetland delineation for Sunoco's Mariner East I 8-inch integrity repair project. Revise the wetland delineation to compare and explain any inconsistencies. In addition, identify any access roads which were installed in wetlands for this repair project. The E&S plan

drawing E&S-4.27 indicates that there are no proposed improvements to the existing road; therefore clarify if road improvements made under the Mariner East I 8-inch Integrity Repair project are remaining in place. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.13(e)(1)(i)(C), 105.21(a)(1)]

73. Provide color photographs of wetland BB151 in the area of the proposed access road crossing. [25 Pa. Code §§105.13(e)(1)(iv)]
74. The E&S plan sheet ES-4.27 states that no improvements are proposed to the existing access road which crosses wetland BB151; however the site plan drawings and impact table indicate temporary matting will be utilized. Revise the application to be accurate and consistent. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.13(e)(1)(i)(C), 105.21(a)(1)]
75. Revise the site plan E&S drawing plan sheet ES-4.33 to accurately depict the stream banks of stream S-I69. The application states the stream has a bank-to-bank width of 10 feet and flows at the edge of wetland I41. Therefore, it appears additional temporary bridges will be necessary for construction. Revise the application accordingly to depict all proposed stream crossings. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.301(1), 105.21(a)(1)]
76. The ATWS is proposed in stream S-I59 on E&S plan sheet ES-4.43; however, no temporary impacts are proposed on the site plan drawing, sheet 27, or the impact table. Revise the E&S site plan drawing to be consistent and accurate with the rest of the application. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.13(e)(1)(i)(C), 105.21(a)(1)]
77. E&S plan sheet ES-4.47 depicts the proposed pipelines in different locations than the trench plugs' locations. Revise the application plan drawings to be accurate and consistent. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.13(e)(1)(i)(C), 105.21(a)(1)]
78. 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 on Sheet ES-0.09 and identify where each method will be used. [25 Pa. Code §§105.13(g)]
79. Revise the impact table to identify the temporary construction ATWS area in the floodway of stream S-J15. [25 Pa. Code §§105.15(a) & Environmental Assessment Form Instructions]
80. Provide plans identifying the proposed activities, structures, and obstructions proposed in the ATWS in the floodway and floodplain of stream S-J15 and wetlands J11 and J10. Identify the timeframe and duration they will remain. [25 Pa. Code §§105.13(e)(1)(I), 105.13(e)(1)(iii)]



81. E&S plan sheet ES-4.54 does not depict any temporary timber mat crossings of wetland K41. It is unclear if all of this wetland within the proposed ROW will be excavated, or if some of it will also be crossed using timber mats. Revise the application plan drawings for this wetland to depict the proposed water obstructions and encroachments. *[25 Pa. Code §§105.13(e)(1)(i)(c)]*
82. Provide color photographs of Pond-J3 and a location map depicting the location and orientation of the photographs. *[25 Pa. Code §§105.13(e)(1)(iv)]*
83. Provide plans identifying the proposed activities, structures, and obstructions proposed in the ATWS areas in the floodplain of stream S-I49. Identify the timeframe and duration they will remain. *[25 Pa. Code §§105.13(e)(1)(i), 105.13(e)(1)(iii)]*
84. Revise E&S plan drawing ES-4.6 to depict the stream banks of stream S-BB83 and depict the proposed temporary crossing of this stream and wetland KP2. *[25 Pa. Code §§105.13(e)(1)(i), 105.301(1)]*
85. Provide plans identifying the proposed activities, structures, and obstructions proposed in the ATWS areas in the floodplain of stream S-BB101. Identify the timeframe and duration they will remain. *[25 Pa. Code §§105.13(e)(1)(i), 105.13(e)(1)(iii)]*
86. E&S plan sheet ES-4.91 does not depict any temporary timber mat crossings of wetland BB44. It is unclear if all of this wetland within the proposed ROW will be excavated, or if some of it will also be crossed using timber mats. Revise the application plan drawings for this wetland to depict the proposed water obstructions and encroachments. *[25 Pa. Code §§105.13(e)(1)(i)(c)]*
87. 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, and 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)]*
88. 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)]*
89. Provide profiles for the temporary crossings identified in the E&S plan that depict at a minimum the existing conditions and the proposed conditions. Identify the aggregate and the typical timber mat crossings being used. *[25 Pa. Code § 105.13(g)]*

90. 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-J45, S-K1, S-BB5, S-I46. 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)]*
91. While the site plan drawings have a note indicating that Letort Spring Run and its tributaries have an existing use designation as High Quality, Cold Water Fishes (HQ-CWF), the site plan stream identification and impacts tables should reflect this when they list the stream classification. Revise the site plans and impact tables accordingly to identify the existing use of HQ-CWF for Letort Spring Run and its Tributaries. *[25 Pa. Code §§105.14(b)(11), 105.15(a)]*
92. The E&S plan details for temporary stream crossings and plan drawings state timber mats or 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)]*
93. 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 ]*
94. 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)]*
95. 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)]*

96. 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)]*
97. 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-J31, S-BB100, S-I80, S-178, S-J22, S-BB7, S-BB5, S-I46, S-BB40, and S-H70. *[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)]*
98. Wetlands I24, I31, and I32 are identified on the impact table as Exceptional Value because, or partially because, of a Scenic River. While the Yellow Breeches and Letort Spring Run are listed in the State Scenic River System, the stream reaches are not designated as Wild or Scenic. Therefore, these wetlands are not Exceptional Value. Revise the application accordingly. *[25 Pa. Code §§105.17(1)(iii)]*
99. Wetland KP2 is located in the floodplain of a stream tributary to a wild trout stream. Therefore, it is Exceptional Value. Revise the application accordingly to indicate that the wetland is Exceptional Value for this reason. *[25 Pa. Code §§105.17(1)(iii)]*
100. In accordance with the definition of Wild Trout Streams in Chapter 105 and PAFBC regulations, streams which drain to stream reaches on the list of streams which support natural trout reproduction are also wild trout. Therefore, revise Table 3 to identify all streams which drain to streams on this PAFBC list as wild trout, or TNR. *[25 Pa. Code §§105.1, 105.15(a), 105.21(a)(1), & 58 Pa. Code §§57.11(b)(4)]*
101. Revise the impact table to identify that stream S-I46 is wild trout (TNR) as it is tributary to a wild trout reach. *[25 Pa. Code §§105.1, 105.15(a), 105.21(a)(1), & 58 Pa. Code §§57.11(b)(4)]*
102. 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)]*

103. 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)]*
104. 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

105. 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)]*
- a. Wetland J13 is identified at “BT A/O” in the impact table for why a wetland is EV. It appears that this represents that Bog Turtle is assumed to occupy a wetland, but this is unclear. In addition, wetland J13 and J15 are referenced in the same USFWS e-mail concerning Bog Turtle, but J15 is not identified as EV. Provide clarification on the meaning of the EV designation and why both wetlands are not identified as EV. *[25 Pa. Code §§105.17(1), 105.13(e)(1)(x), 105.21(a)(1)]*
- b. One wetland is identified as EV due to Bog Turtle and another is identified as EV due to Bog Turtle A/O. However, based on the information provided to the USFWS it appears there are no Bog Turtle Concerns or conflicts. Clarify why these wetlands are identified as EV. *[25 Pa. Code §§105.17(1), 105.13(e)(1)(x), 105.21(a)(1)]*
- c. 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)]*
106. 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)]*

107. 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)]
108. 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.

109. 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)].
110. Revise Enclosure C & D of the Environmental Assessment to identify and discuss the impacts of the water obstruction and encroachments on Opossum Lake Park. [25 Pa. Code §§105.13(e)(1)(x), 105.15(a), Environmental Assessment Form Instructions]
111. 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)]
112. 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), and Environmental Assessment Instructions]
113. Revise section B.1 of Enclosure C of the Environmental Assessment to be specific to Cumberland County. The watersheds listed are for Huntingdon County. [25 Pa. Code §105.15(a) & §105.21(a)(1)]
114. Revise section D.4 of Enclosure C of the Environmental Assessment to be specific to Cumberland County. The hiking and trails mentioned are located in Huntingdon County. Revise section B.4 d. of Enclosure D of the Environmental Assessment to discuss if hiking trails within the project boundary are associated with proposed water obstructions or encroachments. Revise section B.4 d. of Enclosure D of the Environmental Assessment to discuss the impact(s) to the trail(s), 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), Environmental Assessment Form Instructions]*

115. Revise section A.4.a of Enclosure C of the Environmental Assessment to be specific to Cumberland County. The IBA referenced is in Huntingdon/Blair County. *[25 Pa. Code §§105.15(a), §105.21(a)(1)]*
116. Revise section D.5 of Enclosure C of the Environmental Assessment to be specific to Cumberland County. The areas and habitats mentioned are located in Huntingdon County. *[25 Pa. Code §§105.15(a), 105.21(a)(1)]*
117. 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]*
118. 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), 105.21(a)(1)]*
119. 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]*
120. Revise Enclosure D of the environmental assessment to discuss the impacts the proposed water obstructions and encroachments will have on any Important Bird Areas (IBA). 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)]*
121. 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)]*
122. Revise Enclosure D to discuss potential impacts to any Landscape Conservation areas, Core Habitats, Biological Diversity Areas, or other areas identified in section D.5 of Enclosure C areas from the proposed water obstructions and encroachments. *[25 Pa. Code §§105.15(a), 105.14(b)(4)]*

123. 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)]
124. 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)]
125. 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 including 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 patterns 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)]
126. 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]
127. 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)]
128. 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-K41, K42, and J5 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)]
129. Revise Enclosures C&D to assess the condition 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 alteration 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)]*
130. 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)]*

#### Mitigation Plan/Environmental Assessment

131. 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 alteration 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 applications 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. [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)]

132. 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 alteration 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 applications 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)]
133. 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 acre 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)]

134. 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 along with 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)]

135. 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]
136. 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)]
137. 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)]
138. 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)]
139. 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, include 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)]

Alternatives Analysis

140. 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 with and existing ROW for the majority of the route. However, multiple deviations away from the existing Sunoco pipeline occur within Cumberland 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 Cumberland County have been identified which deviate widely from the existing Sunoco ROW: The stream S-I57 to stream S0150 route deviation; and the steam UNK 11 Ch. 106 area to East of stream S-I40 route deviation. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a]
- 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 with 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)]

- e. 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),
- f. 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)]
- g. It appears that primary impacts and secondary impacts from the Temporary ROW and ATWS's 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)]
- h. It appears that impacts to wetland I62 could be avoided and minimized by re-locating the alignment to the South of the wetland. 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]
- i. It appears that impacts to wetlands I64 and W33d could be avoided and minimized by re-locating the alignment to the North of the wetlands. 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 K16 and stream S-K14 could be avoided and minimized by re-locating the alignment to the North of the wetland and the multiple stream channels. 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 that impacts to wetlands K14 and K15 could be avoided and minimized by re-locating the alignment to the North of the wetlands. 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]*
- l. It appears that impacts to wetland K12 and K13 could be avoided and minimized by re-locating the alignment to the South of the wetlands on the south side of the existing Sunoco Maintenance Corridor. 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]*
- m. It appears that impacts to wetlands K11 and stream S-K6 could be avoided and minimized by re-locating the alignment to the North of the wetland and the multiple stream channels confluence. 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 impacts to wetland I54 could be avoided and minimized by re-locating the alignment to the North and cross the wetland at a narrower point, or further North or South to avoid the wetland. 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]*
- o. It appears that impacts to wetlands I55, I56, and W22d 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]

- p. It appears that impacts to wetland I58 could be avoided and minimized by re-locating the alignment slightly to the East. 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 wetlands I60 and I61 could be avoided and minimized by re-locating the alignment farther 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]
- r. It appears that impacts to wetlands K7 and K9, and stream S-K4 could be avoided and minimized by re-locating the alignment to the South of the existing Sunoco Maintenance Corridor. 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. It appears that impacts to wetlands K5 and W19d could be avoided and minimized by re-locating the alignment farther 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]
- t. It appears that impacts to wetlands K2 and K3, and stream S-K2 could be avoided and minimized by re-locating the alignment to the South or North to avoid wetland impacts and minimize stream impacts by crossing the stream more perpendicular. Alternatively, if this is not practicable, it appears at least that the pipelines could be located in the Northern portion of the proposed ROW to cross the stream more perpendicular. 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]

- u. It appears that impacts to wetland BB155 could be avoided and minimized by continuing the proposed pipeline alignment Farther West on the South side of the existing Sunoco Maintenance Corridor. 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]*
- v. It appears that impacts to wetland J27 could be avoided by locating the proposed alignment farther to the East. 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]*
- w. It appears that impacts to wetlands J26, J25, W14e, and J24 could be avoided and minimized by locating the proposed alignment and ROW on the North of the existing Sunoco Maintenance Corridor. 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]*
- x. It appears that impacts to wetland J21 could be avoided by locating the proposed alignment farther South. If this is not practicable, it appears impacts could be minimized by locating the proposed pipelines farther South within the proposed ROW. 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]*
- y. It appears that impacts to wetlands J20, I48, and I49, and streams S-I77, S-I75, and S-I76 could be avoided and minimized by re-locating the alignment to the South to avoid and minimize stream impacts by crossing the streams more perpendicular and crossing less area of wetlands. Alternatively, if this is not practicable, it appears at least that the pipelines could be located in the Southern portion of the proposed ROW to cross the stream more perpendicular. 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]*

- z. It appears that impacts to wetlands I46, I45, and I44 could be avoided and minimized by locating the proposed alignment and ROW on the North of the existing Sunoco Maintenance Corridor. 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]*
- aa. It appears that impacts to stream S-I65 could be avoided and minimized by locating the pipelines farther south within the proposed ROW to cross the stream in a more perpendicular manner. 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)]*
- bb. It appears that the temporary impacts to the PFO portion of wetland I38 from the ATWS area could be avoided. 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]*
- cc. It appears that impacts to wetland I38 could be avoided and minimized by locating the proposed alignment and ROW on the South of the existing Sunoco pipeline and Maintenance Corridor. If this is not practicable, it also appears that impacts to this wetland could be minimized by crossing the wetland farther East and minimizing PFO conversion 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. *[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a]*
- dd. It appears that impacts to wetland J13 could be avoided by locating the proposed alignment farther to 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]*
- ee. It appears that impacts to wetland K41 could be avoided by locating the proposed alignment farther 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]

- ff. The Alternatives Analysis' discussion on alternatives to avoid and minimize impacts for wetland I36 and J13 states that the alignment originally paralleled Sunoco's existing ROW but has been relocated further southeast. In addition, it states this is to avoid Mechanicsburg, PA. However, the proposed map for I36 discussion doesn't depict the existing ROW, it appears the proposed Route is North of the existing ROW, and this reroute does not avoid Mechanicsburg, PA. Provide detailed alternatives analysis on this re-route, including other routes and impacts documenting that there is not practicable alternative to further avoid and 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]
- gg. Revise the alternatives analysis to discuss and analyze alternative construction methods for the crossing of S-I47, S-I48, and wetlands I30, I31, and I32 to minimize impacts and risk of potential impacts, such as inadvertent returns. The analysis should discuss, at a minimum, conventional bore, micro-tunneling, and open cut trenching installation, and discuss the potential impacts from each, including the potential for inadvertent returns and pollution events caused by a return. Revise the application to include the least impact method of construction. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a]
- hh. It appears that the temporary impacts proposed to wetland KP2 could be avoided by locating the temporary access road to the North or by narrowing the temporary access road. 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]
- ii. The Alternatives Analysis states that reroutes North or South of wetland I25 are not feasible due to the proximity of residences and other structures. However, no information has been provided showing any residences nearby and the aerial photograph provided in the Alternatives Analysis depicts an open field. Revise the application to avoid or minimize impacts, or provide documentation supporting the claim of residences and structures. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7),

*105.18a]*

Stormwater and Floodplain Consistency

141. Provide consistent and up-to-date plans to the Department and Lower Mifflin, Upper Frankford, Lower Frankford, North Middleton, Middlesex, Monroe, Silver Spring, Upper Allen, and Lower Allen Townships. *[25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(v), 105.13(e)(1)(vi), 105.13(e)(1)(i)(A), 105.13(e)(1)(i)(C)]*
142. The following comments pertain to the plans provided to the townships in Cumberland County.
- a. Sheet 186 of 321 provided to Lower Allen Township identifies an existing block valve that is not shown on Sheet 59 of Tab 7A. There has also been a change in the placement of the proposed permanent access road on Sheet 59. Provide consistent and up-to-date plans to the Department and Lower Allen Township. *[25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) & § 105.13(e)(1)(i)(C)]*
  - b. Sheet 59 of Tab 7A shows a proposed block valve setting LOD substantially larger than that shown on Sheet 186 of 321 provided to Lower Allen Township. Provide consistent and up-to-date plans to the Department and Lower Allen Township. *[25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) & § 105.13(e)(1)(i)(C)]*
  - c. Sheet 189 of 321 provided to Lower Allen Township and Sheet 62 of Tab 7A show different HDD lengths. Provide consistent and up-to-date plans to the Department and Lower Allen Township. *[25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) & § 105.13(e)(1)(i)(C)]*
  - d. Chapter 110-11.N of the Lower Allen Township Ordinance states that all utilities, such as gas lines, electrical and telephone systems, placed in designated floodplain districts shall be located, elevated, where possible, and constructed to minimize the chance of impairment during a flood. *[25 Pa. Code § 105.13(e)(1)(vi)]*
  - e. Article 6.11 of the Lower Frankford Township Ordinance states that no new construction or development shall be located within the area measured fifty (50) feet landward from the top-of-bank of any watercourse, whether or not such area is located in a FP, Flood Plain Conservation District. There are several stream crossings within Lower Frankford Township that do not meet this regulation. Lower Frankford Township provided a consistency letter. Clarify this discrepancy and provide alternatives. *[25 Pa. Code § 105.13(e)(1)(vi)]*

- f. There are ATWS areas and an access road shown on Sheet 17 of Tab 7A that are not identified on Sheet 144 of 321 provided to Lower Frankford Township. Provide consistent and up-to-date plans to the Department and Lower Frankford Township. *[25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) & § 105.13(e)(1)(i)(C)]*
- g. Sheet 33 of Tab 7A indicates a substantially larger block valve setting LOD than Sheet 160 of 321 provided to Middlesex Township. Provide consistent and up-to-date plans to the Department and Middlesex Township. *[25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) & § 105.13(e)(1)(i)(C)]*
- h. Sheets 35 and 36 of Tab 7A show different HDD lengths than sheets 162 and 163 of 321 provided to Middlesex Township. Provide consistent and up-to-date plans to the Department and Middlesex Township. *[25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) & § 105.13(e)(1)(i)(C)]*
- i. HDD paths are different between Sheets 164 and 165 of 321 provided to Middlesex Township and Sheets 36 and 37 of Tab 7A. Provide consistent and up-to-date plans to the Department and Middlesex Township. *[25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) & § 105.13(e)(1)(i)(C)]*
- j. HDD lengths are different between Sheets 166, 167, and 168 of 321 provided to Middlesex Township and Sheets 39, 40, and 41 of Tab 7A. Provide consistent and up-to-date plans to the Department and Middlesex Township. *[25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) & § 105.13(e)(1)(i)(C)]*
- k. HDD lengths are different between Sheet 182 of 321 provided to Upper Allen Township and Sheet 55 of Tab 7A. Provide consistent and up-to-date plans to the Department and Upper Allen Township. *[25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) & § 105.13(e)(1)(i)(C)]*
- l. There is a temporary access road on Sheet 183 of 321 provided to Upper Allen Township that is not shown on Sheet 56 of Tab 7A. Provide consistent and up-to-date plans to the Department and Upper Allen Township. *[25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) & § 105.13(e)(1)(i)(C)]*
- m. HDD paths are different between Sheet 184 of 321 provided to Upper Allen Township and Sheet 57 of Tab 7A. Provide consistent and up-to-date plans to the Department and Upper Allen Township. *[25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) & § 105.13(e)(1)(i)(C)]*
- n. Sheet 48 of Tab 7A shows a substantially larger block valve setting LOD than sheet 175 of 321 provided to Silver Spring Township. Provide consistent and up-to-date

- plans to the Department and Silver Spring Township. [25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) & § 105.13(e)(1)(i)(C)]
- o. The temporary access road that crosses Stream S-BB83 on Sheet 37 of Tab 7A is not the same as the access road shown on Sheet 164 of 321 provided to Middlesex Township. Provide consistent and up-to-date plans to the Department and Middlesex Township. [25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) & § 105.13(e)(1)(i)(C)]

### Other

- 143.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)]
- 144.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

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  
Cumberland County Conservation District  
Cumberland County Planning Commission  
Lower Mifflin Township  
Upper Frankford Township  
Lower Frankford Township  
North Middleton Township  
Middlesex Township  
Monroe Township  
Silver Spring Township  
Upper Allen Township  
Lower Allen Township