December 2, 2016

By FEDERAL EXPRESS

Mr. Edward J. Muzic, P.E.
Civil Engineer Manager
Department of Environmental Protection
Waterways and Wetlands – South Central Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110

Re: DEP File E31-234
Technical Deficiency Response
Chapter 105 Dam Safety and Waterway Management Joint Permit Application
Sunoco Pipeline L.P. – Pennsylvania Pipeline Project (Mariner East II)
Penn, Shirley, Tell, and Union Townships, Huntingdon County

Dear Mr. Muzic:

On behalf of our client, Sunoco Pipeline L.P. (SPLP), Tetra Tech, Inc. provides the following responses to the Pennsylvania Department of Environmental Protection (DEP) Technical Deficiency letter dated September 6, 2016 regarding the above-referenced Chapter 105 Joint Permit Application (Joint Permit Application) for the Pennsylvania Pipeline Project (Project or PPP as defined in the application). SPLP has had minor revisions to the proposed workspaces since submittal of the original application. These revisions have occurred as result of preparing a response to these technical deficiencies, landowner requests, further reduction of impacts to aquatic resources, or minor limit of disturbance (LOD) changes to facilitate construction. The supporting attachments represent a revision of the Joint Permit Application that not only addresses the DEP's technical deficiencies, but also provides revised sections that reflect the most current Project areas. The attachment includes all necessary components of a complete application; however, it excludes previously submitted aquatic resource reports. Please consider only the previously submitted aquatic resource reports as part of this application revision. We are providing two hard copies and two CDs of the revised application.

For ease of your review, each DEP item is set forth verbatim below, followed by a narrative response with supporting attachments.

Tetra Tech
301 Ellicott St, Buffalo, New York 14203
Tel 716.849.9419 Fax 716.849.9420 www.tetratech.com

Comments and Responses to September 6, 2016 Technical Deficiency Letter

HU 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:	NA - Heading
HU 1.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.	A Comprehensive Evaluation of Compliance and an evaluation of Resources Identification and Project Impacts for the Project as a whole have been added to the application materials and is located in Attachment 11, Enclosure E, Parts 1 and 2. This Comprehensive Evaluation of Compliance references application materials that apply to each requirement pursuant to 25 Pa. Code § 105.18a and associated referenced regulations, including 25 Pa. Code §§ 105.13(e)(1)(vii-x), (2), (3), (g), and (j); and 25 Pa. Code § 105.15.
HU 1.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:	A Comprehensive Evaluation of Compliance for the entire Project has been added to the application materials and is located in Attachment 11, Enclosure E, Part 1. This Comprehensive Evaluation of Compliance references application materials that apply to each requirement pursuant to 25 Pa. Code § 105.18a and associated referenced regulations, including 25 Pa. Code § 105.14.

HU 1.b.i	Antidegration Analysis - Prepare and submit an analysis and information that addresses consistency with State antidegradation requirements contained in Chapters 93, 95 and 102 (relating to water quality standards; wastewater treatment requirements; and erosion and sediment control) and the Clean Water Act (33 U.S.C.A. § § 1251—1376) for this entire project and other potential or existing projects. [25 Pa. Code § 105.14(b)(11)].	An Antidegradation Analysis consistent with 25 Pa. Code § 105.14(b)(11) has been prepared and is provided in Attachment 11, Enclosure E, Part 5.
HU 1.b.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)].	A secondary impact analysis consistent with 25 Pa. Code § 105.14(b)(12) has been prepared and is provided as part of the Resource Identification and Project Impacts in Attachment 11, Enclosure E, Part 2.
HU 1.b.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	A stand-alone Cumulative Impacts Analysis has been added to the application materials and is located in Attachment 11, Enclosure E, Part 6.

	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].	
HU 1.b.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]	A Comprehensive Evaluation of Compliance for the Project has been added to the application materials and is located in Attachment 11, Enclosure E, Part 1. This Comprehensive Evaluation of Compliance cross-references the application materials that address each requirement in 25 Pa. Code § 105.18a.
HU 1.b.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]	A comprehensive Alternatives Analysis has been added to the application materials to address this comment and is located in Attachment 11, Enclosure E, Part 3. A Cumulative Impacts Analysis has been added to the application materials to address this comment and is located in Attachment 11, Enclosure E, Part 6. An Impact Avoidance, Minimization, and Mitigation Procedures document has also been added to address this comment, located in Attchment 11, Enclosure E, Part 4.
HU 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	The revised Inadvertent Return Assessment, Prevention, Preparedness and Contingency Plan (IR Plan) provided in Attachment 12, Tab 12C includes an Inadvertent Return (IR) risk assessment for each of the Horizontal Directional Drills (HDDs).

	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)]	
HU 2.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.	An HDD Risk Assessment is included as part of the revised IR Plan provided in Attachment 12C. The assessment discusses previous inadvertent returns (IR) and provides the data and analysis requested.
HU 2.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.	The Water Supply Assessment, Preparedness Prevention and Contingency Plan (Water Supply Plan) provides for the assessment of the existing public and private water supplies in or along the Project, as well as idenitifies prevention and preparedness measures to be implemented to protect those supplies. The IR Plan outlines the preconstruction activities implemented to ensure sound geological features are included in the drill profile, the measures to prevent impact, and the preparedness plan if an impact were to occur. These plans are provided in Attachment 12.
HU 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	An Antidegradation Analysis, provided in Attachment 11, Enclosure E, Part 5, fully explains the measures that SPLP will implement to comply with the antidegradation requirements of DEP's water quality standards program.

	(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)].	
HU 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)]	In previous submissions and coordination documents, the diameter of the second pipeline had not yet been determined by engineering, but SPLP understood the maximum possible size would be 20 inches in diameter. SPLP has completed the initial engineering details for the necessary capacities of the second line and has determined that the second pipe will be 16 inches in diameter. The application has been revised to reference a 16-inch pipeline.
HU 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]	Question 13.0.1 of the General Information Form (GIF) in Attachment 1 has been revised to address this comment.
HU 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	The Application has been revised to provide a consistent title for M.L. Gordon. A "Delegation of Authority" letter authorizing Mr. Gordon to sign the Application on behalf of the partnership is provided with the Joint Application Form.

	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)]	
HU 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)]	The Pennsylvania Game Commission (PGC) provided clearance by letter dated June 8, 2016. A copy of this letter is provided in Attachment 6.
HU 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)]	While DEP is required to consider potential impacts to historic resources under 25 Pa. Code Chapter 105 when DEP conducts reviews of a water obstruction, encroachment or dam permit application, none of the regulations or guidance referenced in DEP's comment require SPLP to provide clearance or approval from the PHMC as part of a Chapter 102 or Chapter 105 permit application. Furthermore, as noted in a letter from Alexandra C. Chiaruttini, Esq., DEP's Chief Counsel concerning the SPLP Pennsylvania Pipeline Project, "the [Pennsylvania] History Code does not authorize our agency or any Commonwealth agency to stop the processing of permits solely due to possible or actual presence of archaeological or historic resources, unless the agency's enabling legislation contains specific statutory authorization for such action. DEP does not have such authorization here." A copy of the February 1, 2016, letter from Ms. Chiaruttini is provided in Attachment 4. See also Pennsylvania History Code §508(a)(4). Accordingly, SPLP requests that DEP continue its review of SPLP's applications. SPLP will continue to work with the PHMC to ensure that impacts to cultural resources are avoided where possible.

		In addition, SPLP has included with its Chapter 102 application a Cultural Resources Unanticipated Discovery Plan to be implemented during construction that outlines the protocols SPLP will follow if SPLP unexpectedly encounters archaeological or historic resources, including notification to DEP and PHMC and cessation of earth disturbance.
HU 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)]	The Project Description in Attachment 9 to the Application has been updated to reflect the timing of the installation of the 20-inch and the 16-inch pipeline. The two pipelines will be installed during the same time period. The 20-inch pipeline would be installed first, followed by the 16-inch line. For safety purposes, the installation would be staggered by what is estimated to be no more than 60 days. At some HDDs with longer drills, however, the time period between installation of the two pipelines may exceed 60 days. Both pipelines will be installed within the same limit of disturbance so there would be no additional, temporary disturbance resulting from a second separate installation. Any temporary stabilization required would be implemented in accordance with Project's E&S Plans.
HU 9.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.	The Project Description in Attachment 9 to the Application has been updated to reflect the timing of the installation of the 20-inch and the 16-inch pipeline and any permanent and temporary impacts from the second pipeline installation.
HU 9.b.	If the pipelines are proposed to be installed at separate times, revise your alternatives analysis	Both pipelines would be installed during the same construction period, as described above. Accordingly, the

	to evaluate the feasibility of installing the two pipelines concurrently with one another to avoid and minimize impacts.	Alternatives Analysis has not been revised to evaluate this issue.
HU 9.c.	You may need to revise you fee calculation spreadsheets to account for the additional, temporary disturbance resulting from a second, separate installation.	The 20-inch pipeline would be installed first, followed by the 16-inch line. Any temporary stabilization required would be implemented in accordance with the Project's E&S Plans. Both pipelines will be installed within the same limit of disturbance as set forth in the permit application, so there will be no "additional, temporary disturbance resulting from a second separate installation." Therefore, no revision of the fee calculation spreadsheet is necessary.
HU 9.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.	The 20-inch pipeline would be installed first, followed by the 16-inch line. Any temporary stabilization required would be implemented in accordance with the Project's E&S Plans. Both pipelines will be installed within the same limit of disturbance and in the same construction period.
HU 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)]	Temporary crossings of streams are accommodated by installation of the timber mat, culvert, or railcar equipment bridges as detailed by the standard typical drawings and notes for these types of crossings provided within the E&S Plan (Attachment 12). The contractor may choose from these temporary crossing methods.
HU 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)]	The E&S Plan in Attachment 12 has been revised to identify the proposed work. The associated erosion and sediment controls used to minimize the potential for discharge of fill material to the stream are provided on the plan drawings and/or as referenced to the E&S plan standard typical details. The duration of ATWS use will be consistent with the duration of construction.

HU 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)]	The "permitting purposes" language has been removed. All drawings and maps provided in the application are considered to be final plans.
HU 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)]	The Project Description provided in Attachment 9 includes a narrative outlining SPLP's cathodic protection plans. A typical cathodic test station detail has been added to the E&S Plan Sheets in Attachment 12.
HU 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]	The Project Description provided in Attachment 9 includes an updated narrative outlining SPLP's cathodic protection plans.
HU 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	To reduce overall impacts to the landscape and, in particular, wetlands and streams, pullback areas are sited within the same workspaces designed for the open cut installation of the pipeline to the maximum extent practicable. Pullback areas not proposed within the workspaces needed to install the pipelines via open cut are accommodated by adding Additional Temporary Workspace (ATWS) as shown on the Aerial Site Plans (Attachment 7). Although avoided to the maximum extent practicable, if streams and wetlands are crossed by

	temporary matting. [25 Pa. Code §§105.13(e)(1)(i), 105.13(e)(1)(iii)]	the pullback activity within the ATWS, then temporary crossings or impacts, such as temporary bridges, are identified on the Aerial Site Plans and site-specific E&S Plan sheets. Additional temporary matting and bridges to accommodate the pullback activity including pipe layout and assembly in the open cut areas are also identified on E&S Plan sheets. Temporary bridges and matting will be installed and restored in accordance with the standard typical details provided within the E&S Plan in Attachment 12. The impacts of these activities occur within the permanent and temporary workspaces within the LOD.
HU 16.	The site plan sheets and E&S plan sheets identify the floodway which appears to be measured from the centerline of the stream as opposed to measuring from the top of bank for the 50-feet assumed floodway boundary. Provide floodway boundaries on all plan drawings that adhere to the definitions in Chapter 105 by providing the FEMA mapped floodway boundary, in areas absent a FEMA mapped floodway, the floodway boundary measured 50 feet landward from the top of bank, or in areas absent a FEMA mapped floodway a floodway boundary with evidence provided that the assumed 50 feet floodway is not accurate. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.1]	In absence of a FEMA NFHL Floodway, the PA 50-foot floodways have been created by buffering the stream on each side of its centerline by one-half the bank width of the stream at the crossing plus 50 feet. For example, a stream that has a 5-foot bank width would be buffered by 52.5 feet on each side the stream's centerline, to ensure both the bank width and the 50-foot setback from the bank was encapsulated within the Chapter 105 floodway, as per the definitions identified in Chapter 105. FEMA NFHL data was downloaded and re-analyzed for this Project on September 27, 2016. The 105 and 102 E&S Plans have been checked to assure consistent presentation of these areas.
HU 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	The standard typical detail has been revised to show topsoil segregation. The standard typical detail also notes that topsoil and wetland spoils are to have a physical separation to ensure full restoration and to minimize

	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)]	impacts. Separation may be achieved by geo-fabric, physical space, or matting.
HU 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)]	The standard typical detail on the E&S plans has been revised to better detail ditch trench plug installation (Attachment 12). Additionally, the trench plugs have been moved to the outside of the wetland boundaries and a note added that additional trench plugs will be installed for long open-cut wetland crossings. The project's Environmental Compliance Program team will ensure appropriate spacing.
HU 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	The typical standard trench plug detail provided within the E&S Plan provided in Attachment 12 has been revised to show the trench plug continuing to the bottom of the trench.

	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)]	
HU 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)]	The note for this standard typical detail has been removed so that the detail is applicable to all wetland crossings.
HU 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)]	The temporary stream crossings will remain in place for no greater than one year.
HU 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)]	The revised Project Description provided in Attachment 9 discusses block valves, their location, and the siting criteria that provides shutoff provisions. Valves are shut off remotely or manually. Block valves are also depicted on the aerial site plans provided in Attachment 7, Tab 7A.
HU 23.	The disturbance fee values listed on Part One Section A of the fees calculation worksheet are not summed correctly. Provide a worksheet with the correct values, and submit any difference in fees. [25 Pa. Code §§105.13(c)(2)(iii)(A)]	The impact tables in the attached revised permit application correctly sums the impacts across the three resources: wetlands, streams (including floodways), and the 100-year floodplain fringe (106 areas). The total fee amount for each resource type is provided in Attachment 11, in the "sum rows" of tables 2, 3, and 4 of the Aquatic Resource Impact Tables. The summation of all impacts is provided in Table 1, and a revised fee calculation worksheet that matches the proposed impacts is provided in Attachment 11.

HU 24.	Provide county specific information within the project description. [25 Pa. Code §§105.13(e)(1)(iii)]	The Project Description is intended to encompass the project as a whole; however, it has been revised to include some additional county-specific information. Other components of the application, particularly Attachment 11 (Aquatic Resources Tables, Enclosures A, B, C, and D) provide detailed information specific to the resources and impacts in the county.
HU 25.	Amend Section C of the Application to identify the size of the proposed second pipeline. Other areas in the application indicate a 16-inch pipe is to be used, but Section C describes a pipe that is up to 20-inch diameter. [25 Pa. Code §§105.13(e)(1)(iii)(A)]	The Section C of the Joint Application Form has been updated to describe the second line as 16 inches in diameter.
HU 26.	Section F of the Application indicates the professional engineer's seal and certification is N/A. Plans, specifications and reports accompanying applications for any water obstructions or encroachments which would pose a threat to human life or a substantial potential risk to property shall be affixed with seal and signature of a registered professional engineer. The seal and certification for Chapter 105 are provided in Tab 7. Remove the N/A label from Section F. [3150-PM-BWEW0036A Rev. 3/2013 Instructions]	The N/A label has been removed from Section F of the Application.
HU 27.	Provide the letters of approval from Altoona Water Authority and Huntingdon Area Water and Sewage Authority and update Question 16.0.2 of the GIF. [1300-PM-BIT0001 5/2012 Instructions]	The water suppliers listed in question 16.0.2 of the GIF are those preliminarily identified as potential temporary water suppliers to facilitate hydrostatic testing. The PPC Plan in Attachment 12, Tab 12A has been supplemented with a Water Supply Plan (Attachment 12, Tab 12B), which addresses all correspondence with water and sewer authorities, including letters to the Altoona Water

		Authority and Huntingdon Area Water and Sewage Authority. The GIF question has been updated, and final agreements between the contractor and the water supplier can be supplied once they are in place. The Project does not require any permanent water supplies.
HU 28.	Provide a letter from the municipalities commenting on the analysis of the project's impact on the floodway delineation and water surface profiles. [25 Pa. Code §§105.13(e)(1)(vi)]	25 Pa. Code § 105.13(e)(1)(vi) requires that a Project application be accompanied by a floodplain management analysis and a letter from the county or municipality's comments on the analysis if the Project is located within a floodway delineated on a FEMA map. No portion of the Project crosses a FEMA designated floodway in Penn, Shirley, Tell, or Union Townships. Therefore, SPLP is not required to provide as part of its Chapter 105 application responses from these municipalities regarding floodplain management consistency. Copies of the correspondence with these municipalities regarding floodplain consistency requirements are provided in Attachment 14.
HU 29.	Regulations 25 Pa. Code Sections 265.51 and 265.56 listed on page 3 of the PPC Plan do not exist. Correct the PPC Plan to demonstrate proper compliance. [25 Pa. Code §§105.21.(a)(1); §91.33(b)]	The PPC Plan in Attachment 12, Tab 12A has been revised to remove the reference and cite appropriate regulations where necessary.
HU 30.	It appears that a water obstruction and encroachment permit may be required for the proposed water withdraws and discharges. [25 Pa. Code §§105.3(a)(4), 105.11(a), 105.13(e)(1)(i), 105.13(e)(1)(iii), 105.13(e)(1)(x), 105.14(b)(4), 105.14(b)(6), 105.301(1), 105.301(7), 105.301(5), 105.301(3), 105.151(1), 105.151(3), 105.161(a)(3), 105.161(4)]	Aughwick Creek is the only water withdrawal planned to be used in Huntingdon County. Water withdrawals from Aughwick Creek will use temporary and above-ground equipment. This water withdrawal location is labeled on the Chapter 105 drawings. Additional details, including specific equipment configurations are included in the Chapter 102 E&S drawing details, which are referenced in the Chapter 105 drawings. All encroachments and

		obstructions (e.g., pump pad) are identified on the Chapter 102 drawings and included within the limit of disturbance. SPLP has obtained the Project's DEP PAG-10 General NPDES Discharge Permits (Authorization ID No. PAG1106869 and PAG1105897) to allow discharge of hydrostatic test waters. The length of time the structures will be used is also captured in the PAG10 permit application. In addition to the information provided in the PAG-10 permit application, all discharge outfall locations are shown on the Chapter 105 drawings and supporting information such as typical discharge details are included in the Chapter 102 E&S drawings which are referenced in the Chapter 105 drawings.
HU 30.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.	Water withdrawals in Huntingdon County (i.e., Aughwick Creek) will use temporary and above-ground equipment. The water withdrawal location is labeled on the Chapter 105 drawings. Additional details, including specific equipment configurations are included in the Chapter 102 E&S drawing details, which are referenced in the Chapter 105 drawings. All encroachments and obstructions (e.g., pump pad) are identified on the Chapter 102 drawings and included within the limit of disturbance. All discharge outfall locations are shown on the Chapter 105 drawings and supporting information such as typical discharge details are included in the Chapter 102 E&S drawings which are referenced in the Chapter 105 drawings. Per a conference call with DEP on September 27, 2016, it was agreed that call-out notes will be added on Chapter 102

		drawings to refer to typical discharge structure details instead of supplying full cross sections at each outfall location. SPLP has obtained the Project's DEP PAG-10 General NPDES Discharge Permits (Authorization ID No. PAG1106869 and PAG1105897) to allow discharge of hydrostatic test waters. The permit application captures the details of the mainline and HDD testing discharges including discharge capacity, methods, and structures. All discharge structures are located within the LOD. The permit application captures the details of the mainline and HDD testing discharges including discharge capacity, methods, and structures. All discharge structures are located within the LOD. The length of time the structures will be used is also captured in the PAG10 permit application.
HU 30.b.	Revise the impact tables to include these impacts.	All encroachments and obstructions for proposed water withdrawal and discharge piping are included within the Project limits of disturbance, and impacts are reflected in Tables 2, 3, and 4 provided in Attachment 11.
HU 30.c.	Provide a description and plans of how the water will be discharged or withdrawn, the discharge capacity, the withdraw rate, the methods to be utilized, what equipment and structures are proposed to be placed and utilized in waters of the Commonwealth, the length of time which obstructions will remain in place.	Aughwick Creek is the only water withdrawal planned to be used in Huntingdon County. Water withdrawals at this location will use temporary and above-ground equipment. This water withdrawal location is labeled on the Chapter 105 drawings. Additional details, including specific equipment configurations are included in the Chapter 102 E&S drawing details, which are referenced in the Chapter 105 drawings. All encroachments and obstructions (e.g., pump pad) are identified on the Chapter 102 drawings and included within the limit of disturbance. Withdrawal rates from Aughwick Creek will be limited to 600 gpm. The

		duration of use for Aughwick Creek is expected to be a few weeks. Equipment will be removed from the floodway when not in use and in the event of any flooding. This water source is planned as the source of water to drill and test eight HDDs. Regarding discharges, SPLP has obtained the Project's DEP PAG-10 General NPDES Discharge Permits (Authorization ID No. PAG1106869 and PAG1105897) to allow discharge of hydrostatic test waters. The permit application captures the details of the mainline and HDD testing discharges including discharge capacity, methods, and structures. The length of time the structures will be used is also captured in the PAG10 permit application. In addition to the information provided in the PAG-10 permit application, all discharge outfall locations are shown on the Chapter 105 drawings and supporting information such as typical discharge details are included in the Chapter 102 E&S drawings which are referenced in the Chapter 105 drawings.
HU 30.d.	Provide cross sections, profiles, and hydraulic analysis for all piping placed in existing stream culverts and along and within stream channels.	No piping is proposed to be placed in existing stream culverts for this withdrawal.
HU 30.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.	The Environmental Assessment was updated to capture the impacts of the water obstructions and withdrawals on Aughwick Creek. The area of the impacts will be contained to the LOD. No impacts are associated with the temporary piping and intake screens for the water withdrawal. Water withdrawal activities for Aughwick Creek will be below SRBC's permitting thresholds; therefore, no docket

		is required through the SRBC. Proper monitoring of the withdrawal activities will be conducted while the water source is used.
HU 30.f.	Provide documentation of submission of proposed water obstructions and encroachments for these activities to each jurisdictional agency (PHMC, USFWS, PFBC, PGC, DCNR) and provide clearance from these agencies.	SPLP previously submitted a final request for determination letter from USFWS, PFBC, DCNR and PGC where the Project was described consistent with the attached Application, the consultation history was summarized, and survey reports and mapping (including GIS files) were provided referencing the most current alignment. Copies of these final requests have been submitted, and clearances from all four agencies have been obtained and the conditions of those clearances outlined within the revised Project Description located in Attachment 9. Copies of the submissions are located in Attachment 6. See the response to HU 8 regarding PHMC.
HU 31.	Provide a registered professional engineer's seal and signed certification, in accordance with §106.12(g), which shall read as follows: ''I (name) do hereby certify to the best of my knowledge, information and belief, that the information contained in the accompanying plans, specifications, and reports has been prepared in accordance with accepted professional practice, is true and correct, and is in conformance with Chapter 106 of the rules and regulations of the Department of Environmental Protection.''	This signed certification has been added to the Attachment 14 documents.

	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)]	
HU 32.	Indicate the duration each temporary crossing is expected to be in place. [25 Pa. Code §§105.13(1)(iii)(A)]	The Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4 has been revised to provide expected durations of the temporary stream and wetland crossings.
HU 33.	There are certain portions of streams where the pipeline is located less than the minimum 25 feet away from the stream bank. These portions are near hard meanders thereby increasing the potential for exposure during stream migration. Identify and provide adequate erosion protection at these locations, or move the proposed pipes 25 feet away from the stream bank. Natural vegetative stabilization or natural stream design structures should be considered first to avoid and minimize impacts. [25 Pa. Code §§105.314]	Erosion protection is not necessary because the pipeline will be buried below streams in accordance with DEP regulations. 25 Pa. Code §105.313 requires that pipelines under stream beds must be buried at least 3 feet deeper than existing grade, which includes the lowest point in the stream bed. As set forth in the Application, SPLP has committed to burying the pipeline 5 feet below existing stream beds. Where the pipeline is within 25 feet of streams, or where streams are within the Permanent ROW, the depth of cover is designed to avoid and minimize the risk of exposure due to stream migration. The pipeline is also inspected regularly to meet PHMSA regulations. Inspections include the identification of exposures. The Alternative Analysis (Attachment 11, Enclosure E, Part 3) demonstrates that the pipeline is sited in the most environmentally protective route. Site-specific plans are provided as part of the E&S Plan sheet set for these crossing types and provide bank stabilization BMPs.
HU 34.	It appears that the stream data sheets in the Aquatic Resource Report use different formats	The widths reported on Table 3 are accurate bank widths at centerline. Widths provided in the Aquatic Resource

	from one another for stream dimensions (bank width, water width, and water depth). Provide justification for why Streams S-BB104, S-BB106, and S-BB108 use the average widths of the streams. What are the widths of the streams at the proposed crossings? Provide a more accurate depiction of the stream width at the proposed crossings. [25 Pa. Code §§105.13(e)(1)(i)(A)]	reports were estimated. Table 3 now has a footnote to include this explanation.
HU 35.	It appears that the stream data sheets in the Aquatic Resource Report use different formats from one another for stream dimensions (bank width, water width, and water depth). Provide justification for why the low range was used for the bank width of Stream SBB97, while other streams use the average or the high range. Provide a more accurate depiction of the stream width at the proposed crossings. [25 Pa. Code §§105.13(e)(1)(i)(A)]	The widths reported on Table 3 are accurate bank widths at centerline. Widths provided in the Aquatic Resource reports were estimated. Table 3 now has a footnote to include this explanation.
HU 36.	The Bank Width indicated on the Stream Data Sheet for S-Y1 appears to be incorrect. In addition, the Water Width is used as the bank to bank Width on Table 3; however, other streams use the bank width from the stream data sheets. Clarify this discrepancy. [25 Pa. Code §§105.13(e)(1), 105.21(a)(1)]	The bank width has been revised to 20 feet and an updated data sheet is provided in the supplemental information provided in Attachment 11, Enclosure A.
HU 37.	Information for Stream S-L49 is provided in the Aquatic Resources Report and shown on Sheet 2 of Tab 7A, but could not be found in Table 3 of Section 11. Update the table to include the missing information. [25 Pa. Code §§105.13(e)(1)]	Stream S-L49 is not proposed to be impacted by the Project; therefore it is not reported in Table 3 of Section 11. The floodway for this stream overlaps with the floodway impacts reported for S-L50, S-L51, and S-L52, therefore it is not reported separately from the floodway impacts for S-L50, S-L51, and S-L52 in Table 3.

HU 38.	Information for Stream S-Y4 is provided in the Aquatic Resources Report and shown on Sheet 7 of Tab 7A, but could not be found in Table 3 of Section 11. Update the table to include the missing information. [25 Pa. Code §§105.13(e)(1)]	Stream S-Y4 is not proposed to be directly impacted by the Project. This stream drains less than 100 acres (and is therefore waived from the requirement to obtain a permit under Ch. 105.12.2). SPLP identifies waived floodways on the aerial site plans located in Attachment 7, Tab7A.
HU 39.	Information for Stream S-BB105 is provided in the Aquatic Resources Report, but could not be found in Table 3 of Section 11 or Sheet 17 of Tab 7A. Update the table to include the missing information. [25 Pa. Code §§105.13(e)(1)]	The label for stream S-BB105 was placed incorrectly on the site plans. S-BB105 is not proposed to be directly impacted by the Project. This stream drains less than 100 acres (and is therefore waived from the requirement to obtain a permit under Ch. 105.12.2).
HU 40.	Information for Stream S-L43 is provided in the Aquatic Resources Report and shown on Sheet 21 of Tab 7A, but could not be found in Table 3 of Section 11. Update the table to include the missing information. [25 Pa. Code §§105.13(e)(1)]	Stream S-L43 is not proposed to be directly impacted by the Project. This stream drains less than 100 acres (and is therefore waived from the requirement to obtain a permit under Ch. 105.12.2). SPLP identifies waived floodways on the aerial site plans located in Attachment 7, Tab7A.
HU 41.	Table 3 indicates that the bank to bank width for Stream S-Y7 is 2 feet; however, the bank width on the Stream Data Sheet is 5 feet. Clarify this discrepancy. The length of centerline crossing cannot be less than the bank width. Correct any areas that depict the impacts to S-Y7 inconsistently. [25 Pa. Code §§105.13(e)(1)]	The widths reported on Table 3 are accurate bank widths at centerline. Widths provided in the Aquatic Resource reports were estimated. Table 3 now has a footnote to include this explanation.
HU 42.	Table 3 indicates that the bank to bank width for Stream S-Y10 is 2 feet; however, the bank width on the Stream Data Sheet is 3 feet. Clarify this discrepancy. [25 Pa. Code §§105.13(e)(1)]	The widths reported on Table 3 are accurate bank widths at centerline. Widths provided in the Aquatic Resource reports were estimated. Table 3 now has a footnote to include this explanation.

HU 43.	Table 3 indicates that the bank to bank width for Stream S-Y20 is 3 feet; however, the bank width on the Stream Data Sheet is 2 feet. Clarify this discrepancy. [25 Pa. Code §§105.13(e)(1)]	The widths reported on Table 3 are accurate bank widths at centerline. Widths provided in the Aquatic Resource reports were estimated. Table 3 now has a footnote to include this explanation.
HU 44.	Table 3 indicates that the bank to bank width for Stream S-L33 is 7 feet; however, the bank width on the Stream Data Sheet is 8 feet. Clarify this discrepancy. [25 Pa. Code §§105.13(e)(1)]	The widths reported on Table 3 are accurate bank widths at centerline. Widths provided in the Aquatic Resource reports were estimated. Table 3 now has a footnote to include this explanation.
HU 45.	Table 3 indicates that the bank to bank width for Stream S-M10 is 3 feet; however, the bank width on the Stream Data Sheet is 4 feet. Clarify this discrepancy. [25 Pa. Code §§105.13(e)(1)]	The widths reported on Table 3 are accurate bank widths at centerline. Widths provided in the Aquatic Resource reports were estimated. Table 3 now has a footnote to include this explanation.
HU 46.	Table 3 indicates that the bank to bank width for Stream S-M2 is 3 feet; however, the bank width on the Stream Data Sheet is 2 feet. Clarify this discrepancy. [25 Pa. Code §§105.13(e)(1)]	The widths reported on Table 3 are accurate bank widths at centerline. Widths provided in the Aquatic Resource reports were estimated. Table 3 now has a footnote to include this explanation.
HU 47.	Table 3 indicates that the bank to bank width for Stream S-K96 is 1.5 feet; however, the bank width on the Stream Data Sheet is 3 feet. Clarify this discrepancy. [25 Pa. Code §§105.13(e)(1)]	The widths reported on Table 3 are accurate bank widths at centerline. Widths provided in the Aquatic Resource reports were estimated. Table 3 now has a footnote to include this explanation.
HU 48.	Table 3 indicates that the bank to bank width for Stream S-K87 is 7 feet; however, the bank width on the Stream Data Sheet is 5 feet. Clarify this discrepancy. [25 Pa. Code §§105.13(e)(1)]	The widths reported on Table 3 are accurate bank widths at centerline. Widths provided in the Aquatic Resource reports were estimated. Table 3 now has a footnote to include this explanation.

HU 49.	Stream Data Sheets could not be located in the Aquatic Resources Report for Streams S-Y24 4, S-JH2, S-JH4, S-K92, S-KP3, S-L17, S-L45A, and S-M49. Provide any missing data sheets. [25 Pa. Code §§105.13(1)(i)(A)]	Data Sheets are provided within the supplemental wetland delineation information provided in Attachment 11, Enclosure A.
HU 50.	Chapter 106 Floodplain impacts are not identified for S-L46 on sheet 20 of Tab 7A. Provide plans correctly identifying the impacts to the floodplain. [25 Pa. Code §§106.12(d)(2)]	The revised aerial site plans provided in Attachment 7, Tab7A display the impacts associated with the HDD of stream S-L46, Trough Creek, and the associated 100-year floodplain.
HU 51.	The site specific drawings reference "Stream Restoration" but no detail or plan for this stream restoration has been provided. Provide a plan for the stream restoration referenced in the site specific drawings. In addition, clarify if this will be utilized at additional stream crossings or not and identify the crossings where it will be utilized. [25 Pa Code §§105.13(e)(1)(i)(G), 105.13(e)(1)(i)(C), 105.311(2), 105.15(a), 105.14(b)(4)]	The site specific drawings provided within Attachment 7 and the E&S Plan sheet set in Attachment 12 have been increased in number to cover additional stream crossings, and have been updated to include a stream restoration plan drawing, including plan and profile views and notes. The site-specific plans are specific to the crossing.
HU 52.	The plans indicate that Streams S-M2, S-M4, S-L16, S-L15, S-L13, S-L21, S-L51, S-L52, S-L53, S-Y19, S-JH2, S-BB106, S-BB97, S-L48, S-L42 within wetland L24, S-L25, S-M17, S-L34, S-M9, M11, S-M20, S-K82, S-K89, and S-K85 flow in and along and under the ROW and proposed pipelines and not across and immediately through them or start/end in the area of excavation for the pipes. The plans provided for S-M18 and S-M4 in Tab 7D do not adequately depict the existing or proposed conditions upon stream restoration. There are no site specific plans for S-M2, S-L16, or S-	Site-specific drawings have been revised or new site-specific drawings prepared for these crossings and are provided in the revised and now included within Attachment 7 and the E&S Plan sheet set provided in Attachment 12. These plans provide the existing condition, E&S Plan, and restoration stage plan and profiles for these areas. Additional notes and details are reference and provided with the E&S Plan provided in Attachment 12 and Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4.

	L15. Provide site-specific plans, cross sections, and profiles that adequately depict the existing and proposed conditions, stream bed, stream banks, limits of excavation, and methods for the stream restorations. [25 Pa. Code §§105.13(e)(1)(i)(C), 105.13(e)(1)(i)(G), 105.301]	
HU 53.	The ATWS area in the floodway of Stream S-L30 on Sheet 36 of Tab 7A is designated for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to the stream. [25 Pa. Code §§105.13(g)]	A standard typical detail has been added to the E&S Plan sheet set located in Attachment 12 to depict protection measures to be implemented when spoil is located within floodways, floodplains, or wetlands. Where applicable, standard typical details for stream crossings found within the E&S Plan located in Attachment 12 also depict protection measures for spoil.
HU 54.	The ATWS area in the floodway of Stream S-L45a on Sheet 21 of Tab 7A is designated for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to the stream. [25 Pa. Code §§105.13(g)]	A standard typical detail has been added to the E&S Plan sheet set located in Attachment 12 to depict protection measures to be implemented when spoil is located within floodways, floodplains, or wetlands. Where applicable, standard typical details for stream crossings found within the E&S Plan located in Attachment 12 also depict protection measures for spoil.
HU 55.	The ATWS area in the floodway of Stream S-M3 on Sheet 43 of Tab 7A is designated for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to the stream. [25 Pa. Code §§105.13(g)]	A standard typical detail has been added to the E&S Plan sheet set located in Attachment 12 to depict protection measures to be implemented when spoil is located within floodways, floodplains, or wetlands. Where applicable, standard typical details for stream crossings found within the E&S Plan located in Attachment 12 also depict protection measures for spoil.

HU 56.	The ATWS area in the floodway of Stream S-Y22 on Sheet 3 of Tab 7A is designated for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to streams. [25 Pa. Code §§105.13(g)]	A standard typical detail has been added to the E&S Plan sheet set located in Attachment 12 to depict protection measures to be implemented when spoil is located within floodways, floodplains, or wetlands. Where applicable, standard typical details for stream crossings found within the E&S Plan located in Attachment 12 also depict protection measures for spoil.
HU 57.	The ATWS area in the floodway of Stream S-Y23 on Sheet 4 of Tab 7A is designated for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to streams. [25 Pa. Code §§105.13(g)]	A standard typical detail has been added to the E&S Plan sheet set located in Attachment 12 to depict protection measures to be implemented when spoil is located within floodways, floodplains, or wetlands. Where applicable, standard typical details for stream crossings found within the E&S Plan located in Attachment 12 also depict protection measures for spoil.
HU 58.	The ATWS area in the floodplain of Stream S-Y1 on Sheet 6 of Tab 7A is designated for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to streams. [25 Pa. Code §§106.3(2)]	A standard typical detail has been added to the E&S Plan sheet set located in Attachment 12 to depict protection measures to be implemented when spoil is located within floodways, floodplains, or wetlands. Where applicable, standard typical details for stream crossings found within the E&S Plan located in Attachment 12 also depict protection measures for spoil.
HU 59.	The temporary access road that crosses the floodplain on Sheet 6 does not appear to be included in the calculations for temporary floodplain impacts. Provide an accurate value for the impacts within the floodplains where proposed activities will occur. [25 Pa. Code §§106.(d)(2)]	The impact calculation to the 100-year floodplain associated with S-Y1 (James Creek) has been updated to ensure that all activities and impacts are calculated appropriately. Table 3 of Attachment 11 has been revised accordingly.

HU 60.	The ATWS areas in the floodways of Streams S-M21 and S-BB98 on Sheet 23 of Tab 7A are designated for spoil; however a plan depicting the location of the spoil in conjunction with E&S controls could not be found. Provide plans that demonstrate proper measures to minimize the potential for discharge of fill material to streams. [25 Pa. Code §§105.13(g)]	A standard typical detail has been added to the E&S Plan sheet set located in Attachment 12 to depict protection measures to be implemented when spoil is located within floodways, floodplains, or wetlands. Where applicable, standard typical details for stream crossings found within the E&S Plan located in Attachment 12 also depict protection measures for spoil.
HU 61.	Several streams will utilize Temporary travel lanes, but the temporary floodway impacts are listed as zero. Clarify these discrepancies. [25 Pa. Code §§105.15(a), 105.21(a)(1), 105.13(e)(1)]	In general, where floodways are crossed and no impacts are calculated for the stream, there is an existing culvert or bridge that is being used, or, SPLP is using a waiver for streams that drain less than 100 acres.
HU 62.	The impact table identifies the acres of Permanent Impact for wetlands L31 and L32 inaccurately. Revise the impact table to identify the correct acres of impact. [25 Pa. Code §§105.15(a), 105.21(a)(1)]	Attachment 11, Table 2 has been revised to display the correct impacts in the permanent ROW to wetlands L31 and L32.
HU 63.	Provide a site-specific auger bore drawing for the bore under Weller Road in the floodway of stream S-Y23. [25 Pa. Code §§105.13(e)(1)(i), 105.301(3)]	Attachment 7, Tab 7C provides the site specific bore drawing for Weller Road.
HU 64.	The site Specific Drawing S-Y3-C -101 is inconsistent with E&S Plan Sheet ES-3.10 and the HDD plan drawings and proposes different locations of the bore face, stream impacts, and E&S BMPs. Revise the plan drawings to be consistent and accurate. [25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i), 105.301]	The revised E&S Plan provided in Attachment 12 has been updated to reference the site-specific drawings and eliminate any inconsistencies between the two drawing sets.
HU 65.	The March 2016 Wetland Delineation Addendum delineates wetland Y7's Palustrine Forested (PFO) and Palustrine Emergent (PEM)	The E&S Plan Sheets ES-3.11 and ES-3.12 have been updated to utilize the most recent wetland delineations from the March 2016 Wetland Delineation Addendum.

	boundaries differently than the July 2015 Aquatic Resources Report. The impact plan drawings utilize the more recent delineation; however, the E&S plans ES-3.11 and ES-3.12 and the HDD plan drawings utilize the July 2015 delineation. Revise the E&S and HDD plan drawings to depict the wetland accurately utilizing the March 2016 Wetland Delineation Addendum delineation. [25 Pa. Code §§105.21(a)(1), 105.451, 105.13(e)(1)(i)(A), 105.13(e)(1)(x)(A)]	
HU 66.	The impact table does not identify any temporary impacts to wetland Y7. Revise the impact table to identify the temporary impacts to wetland Y7 from the proposed temporary access road and quantify the acre(s) of PFO and PEM wetland temporarily impacted. In addition, identify any acres of wetland conversion. [25 Pa. Code §§105.15(a), 105.21(a)(1)]	Table 2 of Attachment 11 has been revised accordingly.
HU 67.	Revise the impact table to identify the linear feet and square feet of the temporary impact to streams S-Y7 and S-Y6 from the proposed temporary access road. [25 Pa. Code §§105.15(a), 105.21(a)(1)]	Table 3 of Attachment 11 has been revised to reflect the temporary impacts of the proposed temporary access roads/bridges over streams S-Y6 and S-Y7.
HU 68.	The E&S plan drawing E&S-3.12 depicts a temporary stream crossing of stream S-Y6 at approximately pipe station 7200+50 which does not cross the stream but rather depicts the edge of the matting overtop of the stream channel. This is inconsistent with the standard detail. Revise the plans to cross the stream as close to	The E&S Plan sheets have been revised and reference by symbology and note that a temporary equipment bridge is called for at this location. The contractor will use the standard details to install the most appropriate bridge to allow safe installation of the pipelines. The contractor is required to install the bridge in accordance with the specification of the typical notes and details. The

	perpendicular as practicable and if the crossing remains as proposed, provide plans depicting how the crossing will be accomplished in this fashion. [25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i), 105.313(b), 105.151(1)]	combination the plan sheet and details will ensure all bridges will be properly installed.
HU 69.	Stream S-CC22 is identified as an UNT to Raystown Lake but flows into S-Y8 which is an UNT to James Creek. Revise and clarify the application to be consistent and accurate. [25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i)(A)]	Both streams S-CC22 and S-Y8 have been updated to be named UNT of Raystown Branch Juniata River (into which James Creek also flows). The appliation has been updated.
HU 70.	The delineated boundaries on LK-2 are inconsistent with the open water visible on the aerial imagery on the plan drawings and on the contours on the plan drawings and the E&S plan drawings ES-3.22 and ES-3.23. Revise the delineation boundaries for LK-2 to be accurate and consistent on the plan drawings and revise the impact table to accurately reflect the proposed impacts. [25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i)(A), 105.13(e)(1)(x)(A)]	The boundaries of Raystown Lake, LK-2, have been updated to reflect the boundary of these features. The attached revised site plans and impact tables include the all changes from the result of this delineation.
HU 71.	Revise HDD plan Drawings PA-HU-0047.0000-RD and PA-HU-0047.0000-RD-16 to include and depict the boundaries of wetland WL-JH2 and stream S-L45A and include a limits of disturbance which is consistent with the plan and E&S drawings. [25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i)(C)]	These drawings have been updated and provide in Attachment 7, Tab 7B to include the noted resources and consistent E&S Plan LOD.
HU 72.	The impact table identifies that stream S-L45A will have a temporary impact; however, the site plan and E&S plan do not depict temporary impacts to this stream. Revise and clarify the application to be consistent and accurate. [25	Sheet 21 of the site plans identifies the impact to the floodway associated with stream S-L45a by Additional Temporary Workspace associated with the HDD of Trough Creek. In the attached revised permit application documents, the impacts to this stream floodway are

	Pa. Code §§105.21(a)(1), 105.13(e)(1)(i), 105.15(a)]	accurately and consistently identified across all parts of the application.
HU 73.	It appears that stream S-L30 continues and crosses the proposed access road identified on plan sheets 36 and 37 and E&S plan Sheet ES-3.60. No stream has been identified in the Aquatic Resource Report. Revise the application to identify this stream and if any water obstructions are proposed. If water obstructions or encroachments are proposed, revise the application accordingly to include them. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.13(e)(1)(iii), 105.21(a)(1)]	The area was field investigated for waters of the Commonwealth. Stream L-30 does not continue. It appears to be a storm water erosional feature carrying storm water from culvert to west (SR 55) through an active cow field and drains to vegetated area to the south. No flow was observed, and a bed and bank was not identified. Supplemental information regarding this location is provided in Attachment 11, Enclosure A.
HU 74.	The proposed route of the pipelines East of stream S-L26 and around stream S-CC10 is outside of the survey area of the Aquatic Resource Report and its Addendums. Provide an aquatic resource delineation and documentation that the area has been investigated for waters of the Commonwealth. [25 Pa. Code §§105.13(e)(1)(x)(A), 105.451, 105.13(e)(1)(i)(A)]	The areas east of stream S-L26 and around stream S-CC10 have been investigated for waters of the Commonwealth. The Supplemental Aquatic Resource Report and Supplemental in Attachment 11, Enclosure A have been updated to reflect the revised survey area.
HU 75.	The 2016 PADEP Field Review Technical Memo, dated May 12, 2016, and found in the Environmental Assessment, contains inaccurate statements regarding the site identified as Huntingdon #4. It states that DEP confirmed no wetland was present at the W46b site and that DEP determined that W46b does not meet wetland soil or hydrology criteria. While DEP was present at this general site location as mentioned in the Memo, Tetra Tech stated on-	Additional-specific data was collected and data sheets identifying this area as upland have been provided within the supplemental information provided in Attachment 11, Enclosure A.

	site that wetland W46b was never fully investigated likely because the islands were not accessible at that time. DEP stated that the area needed to have a wetland determination conducted for the islands in the creek to determine if wetlands are present, and Tetra Tech and RETTEW proceeded to conduct a wetland determination on the islands in the Aughwick Creek and W46b area. DEP did not accompany Tetra Tech and RETTEW into this area and remained further back above the east bank of the creek. In addition, the wetland W46b data sheet states that only the outermost area of W46b was delineated and documents that wetland hydrology, soils, and vegetation criteria were met. This area was not looked at during the on-site meeting. Therefore, while the plans have removed all wetlands from this area, it appears a wetland is present in the area somewhere. Provide a revised wetland delineation for this entire area, including data sheet(s) for the islands in Aughwick Creek and a verification of the W46b data sheet with discussion and revised delineation mapping. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.13(e)(1)(x)(A), 105.451, 105.21(a)(1)]	
HU 76.	Provide profiles for the temporary crossings identified in the E&S plan that depict at a minimum the existing conditions and the proposed conditions. Also, provide information regarding the length of time that all temporary crossings will be in place. Some of the plans	Temporary bridge and wetland mat crossing plan and profiles are presented within the E&S Plan as standard typical details. Several typical temporary crossing methods are presented for streams and a single method for wetlands. The contractor is offered to select the best option to best fit the crossing and meet the needs of

	appear to use unnatural stream contours upon restoration. Identify the aggregate and the typical timber mat crossing being used. [25 Pa. Code §§105.13(e)(1)(i)]	allowing safe travel through and installation of the pipeline while minimizing the impact to the stream and adjacent areas. Restoration of these areas are thoroughly described within the E&S Plan provided in Attachment 12. Approval of the E&S Plan is being sought through the Chapter 102 regulations.
HU 77.	Revise plan sheet 44 to identify the FEMA floodplain boundaries for stream S-K94. [25 Pa. Code §§105.13(e)(1)(i)(A)]	The Aerial Site Plan was revised to add the FEMA/Chapter 106 floodplain area to S-K94 (Blacklog Creek).
HU 78.	The plans indicated on E&S plan ES-3.73 that stream S-K94, which is 20-feet wide, will be temporarily crossed with timber mats. Explain how timber mats will be utilized to construct a temporary bridge of this length. [25 Pa. Code §§105.13(e)(1)(iii)(A)]	The detail on the E&S Plan has been revised to allow for use of a rail car support to facilitate crossing of large spans. The contractor will use the standard details to install the most appropriate bridge to allow safe installation of the pipelines. The contractor is required to install the bridge in accordance with the specification of the typical notes and details. The combination the plan sheet and details will ensure all bridges will be properly installed.
HU 79.	The ATWS area on plan sheet 45 appears to include wetland K71. However, the plan is not of a sufficient scale to depict whether wetland K71 will be impacted or not, and E&S plan sheet ES-3.74 does not contain all of the ATWS area on it. Revise the plan and/or E&S plan to clearly depict this area in the floodway of stream S-K96 and that wetland K71 will not be impacted. [25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(i)]	Wetland K71 is not proposed to be impacted by the Project. However, the attached revised site plans are at a larger scale, which demonstrate that there is no impact to this resource.
HU 80.	Stream S-L16 is depicted on E&S plan sheet ES-3.78 as being crossed by a temporary timber mat at the same location as a proposed gas line. Explain how this will occur and provide	The timber mat has been shifted so that it is not on the gas line on E&S Plan sheet ES-3.78.

	additional plan sheets to show stages of construction if necessary. [25 Pa. Code §§105.13(e)(1)(i), 105.13(e)(1)(iii)(A), 105.21(a)(1)]	
HU 81.	Revise the impact table to separately identify the impact from the proposed travel lane on wetlands K67 and K68 and streams S-K90, S-K9, and S-K93. It is unclear if the proposed impacts are permanent or temporary, clarify if the proposed impacts are permanent or temporary and identify the purpose of the travel lane. [25 Pa. Code §§105.13(e)(1)(i), 105.13(e)(1)(iii), 105.15(a), Environmental Assessment Form Instructions]	The impact table has been revised to identify the impacts from the Travel Only area in a separate row for each resource. The impacts have been quantified and are considered temporary. The purpose of the travel lane is to allow construction equipment to travel smoothly through the area along the existing cleared corridor (e.g., without the need for tree clearing), avoiding the need for each construction phase/crew to move around these areas and disrupt the construction sequence/logisitcs.
HU 82.	It appears the temporary impacts to stream S-K83 from the temporary ROW could be avoided. Revise the application to avoid the temporary impacts to this stream or revise the alternatives analysis to discuss in detail why the temporary workspace is necessary. Note: the E&S plan ES-3.84 does not depict any water obstructions or encroachments in the stream in this temporary ROW. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7)]	The temporary workspace has been adjusted to avoid stream S-K83. The Aerial Site Plan in Attachment 7, Tab 7A and the Impact Tables in Attachment 11 have been revised accordingy.
HU 83.	Stream S-Y11 is identified as perennial draining into stream S-Y10, ephemeral. This appears to be inconsistent. Please clarify if stream S-Y10 is perennial, ephemeral, or needs partially re-classified. [25 Pa. Code §§105.21(a)(1), 105.15(a), 105.14(b)(4)]	The name for each stream was inadvertently attributed to the other waterbody. Stream S-Y11 is the main, perennial channel, and S-Y10 is the ephemeral drainage feeding into it. The attached revised permit application documents reflect this change.
HU 84.	The following streams start and/or end within the aquatic resource survey area and/or	The application has been supplemented with an aquatic resource addendum provided in Attachment 11. The

	proposed ROW and the plan maps, photographs or narrative do not give justification, or appear to depict why they start/end: S-Y21, S-Y20, S-BB104, S-KP3, S-M28, S-L37, S-L36, S-L34, S-M13, S-L25, S-L21, and S-K89. Revise the application to explain their start/end points, at a minimum, within the entire survey area, and ensure that the floodways and proposed floodway impacts are fully identified and depicted. Provide color photographs which depict the resource and surrounding area sufficiently, including photographs of start/end locations. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.13(e)(1)(iv)]	stream lengths and stop and start points were verified or modified based on additional field work. Additional photographs and narrative are provided within the addendum report in Attachment 11, Enclosure A.
HU 85.	Wetland M3 is identified on the impact table, and identified and depicted impact plan drawing sheet 43, as being open cut and stream S-M3 is identified as the floodway being bored. However, the E&S plan sheet ES-3.71 and bore plan drawing PPP-PA-HU-0102.000-RD depict that stream S-M3 and wetland M3 will be bored and the floodway of S-M3 will be bored and partially open cut for bore pits. Revise and clarify the plans and impact tables to be accurate and consistent. [25 Pa Code §§105.21(a)(1), 105.15(a), 105.13(e)(1)(i)]	The attached revised site plans and impact tables have more clearly identified the proposed impacts in the vicinity S-M3 and Wetland M3. Wetland M3 and stream S-M3 will be crossed using a conventional bore, and the wetland will be matted and stream bridged for equipment crossing. Floodway, stream, and wetland impacts are all accounted for in the impact tables in Attachment 11.
HU 86.	The site impact plan sheet 23, E&S plan sheet ES-3.37, site specific drawing S-BB7-C-101, and Bore drawing PPP-PA-HU-0047.012-RD all depict different proposed impacts, construction techniques, and BMPs. Revise the application to provide plan drawings which are	All plans, maps, and figures have been updated to contain consistent information.

	all consistent and accurate, depict the same proposed impacts, and revise the impact table accordingly to accurately identify the proposed impacts. [25 Pa Code §§105.21(a)(1), 105.13(e)(1)(i), 105.15(a)]	
HU 87.	It appears based on the contours that stream S-M9 continues to the East and that the floodway is proposed to be impacted. However, the delineation and floodway are not depicted farther to the East. Revise the application to delineate this stream farther downstream in the area and depict the floodway on the plans. Revise the application accordingly to include any additional impacts. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1), 105.15(a)]	Stream S-M9 was extended to the south and east where it enters a culvert under a roadway. All Project mapping and plans have been updated accordingly. Additional-specific data was collected and supplemental information provided in Attachment 11, Enclosure A.
HU 88.	Stream S-BB97 is proposed to be bored, and wetland BB127 is proposed to be both bored and open cut, according to the Bore plan drawing PPP-PA-HU-0047.012-RD. It appears all of wetland BB127 could be bored to further minimize impacts. Revise the application to bore all of wetland BB127. If this is not practicable, revise the alternatives analysis to provide detailed documentation and evidence as to why this wetland cannot be bored. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a(b)(2), 105.18a(b)(3)]	The workspaces in the vicinity of S-BB97 have been revised to reduce impacts to aquatic resources. The bore has been extended so that Wetland BB127 will not be open trenched. A travel lane is still required to access the Project areas to the west but has been sited to not cross S-BB97 and minimize impact to the PFO wetland in this area. A site-specific drawing has been prepared for this crossing and is provided in Attachment 12 within the E&S Plan sheet set.
HU 89.	The site specific plan drawing S-BB97-C-101 depicts trench plugs within the area proposed to be bored. Revise the application to clarify how trench plugs are to be installed along the bore path of streams S-BB97 and S-M21 and	Attachment 7, Tab 7C contains the site specific bore drawing that has been revised to clarify the trench plug installation.

	wetland BB127. [25 Pa. Code §§105.14(b)(4), 105.13(e)(1)(i)(C), 105.301(10), 105.15(a)]	
HU 90.	The E&S plan drawing ES-3.37 depicts proposed temporary matting in wetland BB127 north of the proposed pipelines while the site specific plan depicts temporary matting south of the proposed pipelines. Revise and clarify the site plans to be accurate and consistent. [25 Pa. Code §§105.13(e)(1)(i), 105.21(a)(1)]	The timber mat has been shifted so that plans are consistent.
HU 91.	It appears the temporary ROW proposed in wetland BB127 may not be necessary if all of the wetland is bored. Revise the application to remove the temporary ROW and temporary impacts to wetland BB127. Alternatively if this is not possible or practicable, provide detailed documentation and evidence explaining why it is necessary and that it cannot be further avoided and minimized. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a(b)(2), 105.18a(b)(3)]	The workspaces in the vicinity of S-BB97 have been revised to reduce impacts to aquatic resources. The bore has been extended so that Wetland BB127 will not be open trenched. A travel lane is still required to access the Project areas to the west but has been sited to not cross S-BB97 and minimize impact to the PFO wetland in this area. A site-specific drawing has been prepared for this crossing and is provided in Attachment 12 within the E&S Plan sheet set.
HU 92.	It appears the road adjacent to wetland M8 is proposed to be bored. Clarify if the road is proposed to be bored, and identify the bore pits on the plan drawings. It appears impacts to wetland M8 could be further minimized by incorporating it into the bore. Revise the application to include boring under wetland M8 and if this is not practicable, revise the alternatives analysis to provide detailed documentation and evidence as to why this is not a practicable alternative to further avoid and	This road will be open cut. The Alternatives Analysis provided in Attachment 11, Enclosure E, Part 3 demonstrates the infeasibility of implementing trenchless methods across the Project.

	minimize impacts. [25 Pa. Code §§105.13(e)(1)(i), 105.14(b)(7), 105.18a(b)(3)]	
HU 93.	It appears the road adjacent to wetland K72 and stream S-K96 is proposed to be bored. Clarify if the road is proposed to be bored, and identify the bore pits on the plan drawings. It appears impacts to wetland K72 and stream S-K96 could be further minimized by incorporating them into the bore. Revise the application to include boring under wetland K72 and stream S-K96 and if this is not practicable, revise the alternatives analysis to provide detailed documentation and evidence as to why this is not a practicable alternative to further avoid and minimize impacts. [25 Pa. Code §§105.13(e)(1)(i), 105.14(b)(7), 105.18a(b)(3)]	The road is proposed to be open cut. The Alternatives Analysis provided in Attachment 11, Enclosure E, Part 3 demonstrates the infeasibility of implementing trenchless methods at this location.
HU 94.	It appears the road adjacent to stream S-K88 is proposed to be bored. Clarify if the road is proposed to be bored, and identify the bore pits on the plan drawings. It appears impacts to wetland K66 and stream S-K88 could be further minimized by incorporating them into the bore. Revise the application to include boring under wetland K66 and stream S-K88 and if this is not practicable, revise the alternatives analysis to provide detailed documentation and evidence as to why this is not a practicable alternative to further avoid and minimize impacts. [25 Pa. Code §§105.13(e)(1)(i), 105.14(b)(7, 105.18a(b)(3)]	The Alternatives Analysis provided in Attachment 11, Enclosure E, Part 3 has been revised to include a discussion on the limitations of trenchless methods and presents an attached trenchless feasibility assessment. The crossing at Stream S-K88 and Wetland K66 was specifically evaluated and determined to not be technically feasible for an HDD or bore. The purpose of the bore to east of Wetland K66 is to bore the road.
HU 95.	Table 3 identifies the Bank to Bank Width for stream S-L29 as 200 feet; however, it also	The data for stream bank width was collected at a slightly wider section of stream S-L29. The attached application

	identifies the Length of Centerline Stream Crossing at HDD/Bore as 148. These are inconsistent at the length of the pipeline crossing cannot be less than the bank to bank width. Revise and clarify the impact table to be consistent and accurate with the plans. [25 Pa. Code §§105.15(a), 105.21(a)(1)]	for permit documents ensure the bank width at centerline crossing is correctly reflected for impact calculations.
HU 96.	Streams S-Y2, S-Y3, S-Y5, S-Y6, S-Y7, S-Y8, S-Y9, S-Y10, S-Y11, S-Y12, and S-Y13 are identified incorrectly and they are UNTs to the Raystown Branch of the Juniata River, not James Creek. Revise the application accordingly. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1)]	All of these streams have been updated to be named UNT to Raystown Branch Juniata River in all the revised application.
HU 97.	Raystown Lake or UNTs to Raystown Lake are not identified as streams in 25. Pa. Code Chapter 93. Revise the following streams to be identified as UNTs to Raystown Branch of the Juniata River: S-Y14, S-Y15, S-Y16, S-CC18, S-Y17, S-Y18, S-Y19, and S-Y20. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1)]	All of these streams have been updated to be named UNT to Raystown Branch Juniata River in the revised application.
HU 98.	Raystown Lake, identified as LK-2, is identified on Table 2, Wetland Impact Summary. However, this is also the Raystown Branch of the Juniata River. Revise the application to identify it as both Raystown Lake and the Raystown Branch of the Juniata River, and identify the Chapter 93 stream designation (WWF, MF) on Table 3. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1), 105.15(a)]	Raystown Lake has been moved from Table 2 (wetland impact summary table) into Table 3 (stream impact summary) to reflect the Chapter 93 and PA Fish and Boat Commission (PAFBC) status for the Raystown Branch Juniata River. Floodway/floodplain impacts associated with this stream are presented within Table 4 (Chapter 106 areas summary). Tables 2 and 4 are provided in Attachment 11.
HU 99.	The following streams are identified as UNTs to Trough creek when they are UNTs to Little	These streams have been updated to be named UNT to Little Trough Creek in the revised application.

	Trough Creek: S-BB104, S-BB108, S-BB106, and S-KP3. Revise the application to identify the streams correctly. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1)]	
HU 100.	The waterbody identified as Pond-I4 is an online pond with an UNT to Little Trough Creek flowing through it. Revise the application to identify that it is also an UNT to Little Trough Creek and identify the Chapter 93 Designated use. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1)]	Table 3 located within Tab 11 has been updated with a footnote to reflect that Pond-I4 is also an UNT to Little Trough Creek and the Chapter 93 designation provided.
HU 101.	Stream S-L46 is identified as Trough creek when it is actually Little Trough Creek. Revise the application accordingly to correctly identify this stream as Little Trough Creek. [25 Pa. Code §§105.13(e)(1)(i)(A), 105.21(a)(1)]	Stream S-L46 has been updated to be named Little Trough Creek in the revised application.
HU 102.	Revise the plan drawings to depict the mapped FEMA Floodplain at the following stream crossings: S-M21, S-M16, S-L40, Access Road South of S-L30, S-K89, and S-K90. [25 Pa. Code §§105.13(e)(1)(i)(A)]	These FEMA floodplains have been added to the drawings and impacts associated with these features have been tabulated and summarized in the attached revised permit application documents.
HU 103.	Revise the application plans to include all avoidance and minimization measures for identified species of concern associated with water obstructions and encroachments from the Pennsylvania Game Commission, Pennsylvania Fish and Boat Commission, Pennsylvania Department of Conservation and Natural Resources, and the U.S. Fish and Wildlife Service. Ensure any seed mixtures, matting, or other specified items are included in the plans and/or E&S plans. In addition, revise the	To ensure contractor compliance, SPLP has developed a state-of-the-art web-based mapping applications that is required to be used by the contractor to determine all special environmental restrictions such as PNDI and trout stream restrictions. All of the restrictions and avoidance measures committed to and approved by PNDI agencies are included in the Project Description within a summary table and within the PNDI agency final determination letters and accepted Conservation Plans included in Attachment 6, Tab B. The same notes in the Project Description are reflected within the E&S Plan notes.

	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)]	Trout stream restrictions and other sensitive species restrictions are also noted on aerial site plans and E&S Plans, however due to the senstive nature of the some of the information not all is depicted. SPLP will implement a comprehensive Environmental Training and Inspection program designed specifically to ensure contractors are appropriate notified and are adhering to such restrictions.
HU 104.	The E&S plan details for temporary stream crossings and plan drawings state timber mats or a temporary equipment bridge may be utilized, but only depicts a timber mat bridge. Provide details for the proposed temporary equipment bridge(s) which depict the size shape, and span of the structure. Provide separate details depicting the timber mat and other bridge structure crossing's cross sections. In addition, revise the E&S plan and/or other plan drawings to identify the method of each temporary stream crossing proposed at each location. [25 Pa. Code §§105.13(e)(1)(C), 105.13(e)(1)(i)(G), 105.13(e)(1)(iii)(A), 105.151(1), 105.21(a)(1)]	The E&S plans (Attachment 12) have been revised to identify that a temporary equipment bridge will be installed or temporary timber matting for wetland will be installed. The contractor is then obligated to utilize any of the approved methods for these crossing types provided within the E&S Notes and Details. Exact dimensions will be dictated by the location and method chosen.
HU 105.	Trench plugs are proposed to be located at wetland/upland interfaces. Additional trench plugs may be necessary along the length of the crossing due to the length and/or slope to maintain hydrology throughout the wetland. Review and revise the application and plans accordingly. Some additional guidance is available in the PA E&S Control BMP Manual. [25 Pa. Code §§105.13(e), 105.18a]	The wetland standard typical crossing detail has been updated to include trench plugs within the wetland for long open-cut wetland crossings. Also, the E&S plan drawings have been revised to be consistent with the detail.

HU 106.	Temporary road stream crossing details utilizing culverts are provided on E&S plans ES-0.09 and ES-0.11; however, the E&S plans and impact plans do not identify that any of these crossings are to be used. Revise the E&S plans to remove these proposed crossing methods if not proposed to be utilized, or identify where the proposed crossing methods will be utilized. [25 Pa. Code §§105.13(e)(1)(i)(C), 105.151(1), 105.21(a)(1), 105.13(e)(1)(iii)(A)]	The E&S Plan provides DEP approved standard typical details for temporary road crossings. The details will be used in cases where alternative crossing methods are needed to accommodate the crossing and safe installation of the pipelines.
HU 107.	Revise the stream Bank Restoration Detail to clearly indicate that the existing bank slope and grade and elevation are to be restored, to identify a biodegradable erosion control blanket to be utilized, and to specify the native plantings to be used. In addition, some stream banks are likely to be a-typical, like vertical banks, or very low banks, or eroding banks. Provide plans and details for how banks of a-typical conditions will be restored. [25 Pa. Code §§105.13(e)(1)(i)(G), 105.13(e)(1)(ix), 105.1, 105.13(e)(1)(x), 105.15(a)(1), 105.14(b)(4), 105.16(d)]	Streams will be restored in accordance with the E&S Plan provided in Attachment 12. The E&S Plan provides the narratives, revised standard typical details, and at several locations site-specific plans for stream restoration. Also the BMPs for restoring streams are discussed within the Impact Avoidance, Minimization, and Mitigation Procedures found in Attachment 11, Enclosure E, Part 4 and are consistent with the E&S Plan. These plans provide details on the erosion control blanket and plantings. Atypical bank situations will be addressed in the field on a site specific basis, and will have the goal of restoring the banks as closely as possible to their preconstruction condition or a more stable angle of repose.
HU 108.	Provide plans or a detail for the restoration of stream beds at open cut stream crossings. This should include replacement of native stream bed material and assurance that no significant changes in bed grade occur. [25 Pa. Code §§105.13(e)(1)(i)(G), 105.13(e)(1)(ix), 105.1,	Native stream bed material will be separated from other spoil for reinstallation after restoration (see the E&S Plan provided in Attachment 12). An evaluation was done for sheer stress of flow against restored native material. If the evaluation indicated that the stream will not be stable with native material, then rip rap will be used. In these cases, native stone will be used for the top six inches of

	105.13(e)(1)(x), 105.15(a)(1), 105.14(b)(4), 105.16(d)]	rip rap. Also, the BMPs for stream bed restoration are discussed within the Impact Avoidance, Minimization, and Mitigation Procedures found in Attachment 11, Enclosure E, Part 4 and are consistent with the E&S Plan.
HU 109.	Provide site specific cross sections for the streams and wetlands which depict the existing and proposed conditions of the streams and wetlands, proposed pipes and depths, the existing stream bed and banks dimensions. [25 Pa. Code §§105.13(e)(1)(i)(G), 105.14(b)(4), 105.301(3), 105.301(4), 105.301(5)]	Additional cross sections are located in Attachment 7, Tab 7G for intermittent and perennial stream crossings that do not have site-specific (Attachment 12), HDD (Attachment 7, Tab 7B), or bore (Attachment 7, Tab 7C) drawings prepared which contain profile information. All existing bank and wetland dimensions are provided within the aquatic resource tables provided in Attachment 11. Typical cross-sectional details provided within the E&S Plan Sheets accommodate the lesser and more minor stream crossings (e.g., those designated ephemeral). All bed and bank and wetland contours are to be restored to the existing condition in accordance with the Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4.
HU 110.	The Mitigation Plan states that the excavated stream banks will be reseeded; however the E&S detail for bank restoration does not indicate this. Revise the Bank Restoration Detail to be consistent and include the native seeding mixture to be utilized. [25 Pa. Code §§105.13(e)(1)(ix), 105.14(b)(4), 105.21(a)(1)]	The bank restoration details have been revised to indicate that stream banks will be reseeded in accordance with the approved seed mixes.
HU 111.	Multiple streams which begin within the proposed ROW or immediately adjacent to it are proposed to be crossed by the proposed pipelines. Revise the application to discuss and provide plans outlining how source(s) of the streams will be protected and maintained.	As described within the enclosures of the Comprehensive Environmental Evaluation provided in Attachment 11, impacts to water resources, including S-L51, S-Y21, S-Y7, S-Y9, S-Y12, S-M48, S-BB104, S-KP3, S-L48, S-M28, S-BB97, S-L34, S-M11, S-L21, S-L16, and S-K89 have been minimized to the maximum extent practicable.

	Revise the Environmental Assessment and Mitigation Plan to discuss the impacts to the streams both within the ROW and the downstream affects to the resources and properties. Provide compensatory mitigation for streams in which flow will be adversely affected. Provide this information for the following streams, at a minimum: S-L51, S-Y21, S-Y7, S-Y9, S-Y12, S-M48, S-BB104, S-KP3, S-L48, S-M28, S-BB97, S-L34, S-M11, S-L21, S-L16, and S-K89. [25 Pa. Code §§105.13(e)(1)(ix), 105.13(e)(1)(x), 105.14(b)(4), 105.14(b)(12), 105.14(b)(3), 105.15(a)(1), 105.16(d)]	Where planned, the crossing and restoration of all Project streams will use temporary equipment bridge installation and dry crossing trenching methods as outlined and described within the E&S Plan provided in Attachment 12 and the Impact Avoidance, Minimization, and Mitigation Procedures provide in Attachment 11, Enclosure E, Part 4. These methods are designed in accordance with the DEP E&S Manual to maintain flow, protect sources, and minimize direct and secondary impacts to on-site and offsite resources. Similarly, adjacent resources are protected from secondary impacts through implementation of the E&S Plan in areas outside of aquatic resources. The Comprehensive Environmental Evaluation demonstrates that when implementing these methods along with site restoration, impacts to water resources are temporary and minor.
HU 112.	The application contains HDD Inadvertent Return Contingency Plans in multiple sections of the application, such as the Mitigation Plan and different species conservation plans. However, the Contingency Plans are not all consistent in terms of agency notifications, and the PAFBC Law Enforcement is not identified as being notified as required in the PAFBC PNDI clearance letter. Also, the HDD table is not included in all versions of the Contingency Plan. Revise the HDD Inadvertent Return Contingency Plans to all be consistent, including the appropriate jurisdictional agencies, and provide documentation that revised plans have been sent to all jurisdictional	The contingency plan has been revised and re-titled to be Inadvertent Return Assessment, Preparedness, Prevention and Contingency Plan (IR Plan). This revised IR Plan is located in Attachment 12, Tab 12C. Note that the older version of this plan is still contained within the application in connection with the documentation of early agency coordination efforts. The PAFBC, PGC, DCNR, and USFWS have been sent the revised IR Plan and copies of this correspondence is provided in Attachment 6, Tab 6B.

	agencies. [25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(ix), 105.14(b)(4)]	
HU 112.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.	An HDD Risk Assessment is included as part of the revised IR Plan provided in Attachment 12C. The assessment discusses previous inadvertent returns (IR) and provides the data and analysis requested.
HU 112.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.	The Water Supply Plan provides for the assessment of the existing public and private water supplies in or along the Project, as well as idenitifies prevention and preparedness measures to be implemented to protect those supplies. The IR Plan outlines the preconstruction activities implemented to ensure sound geological features are included in the drill profile, the measures to prevent impact, and the preparedness plan if an impact were to occur. These plans are provided in Attachment 12.
HU 113.	Agency notification should occur when inadvertent returns happen in any water resource, not just bog turtle areas. Correct the HDD Inadvertent Return Contingency Plan to reflect proper notifications. [25 Pa. Code §§105.14(b)(4)]	The original IR plan included agency notification if a return occurred within a water resource, not just bog turtle wetlands. Based on other DEP comments, the IR Plan has been revised and provided in Attachment 12, Tab 12C.
HU 114.	The following wetlands are identified in the application as Exceptional Value (EV) due to Wild Trout: W332, W333, K63, K65, K66, K67, K68, L7, L8, and L9. However, the	These wetlands are associated with George Creek, which were previously considered a wild trout stream by PAFBC until they were all removed in spring/summer 2016. These wetlands have been revised so that their prior

	department was unable to determine wild trout status for the adjacent streams or tributaries thereto. Clarify and revise the application accordingly. [25 Pa Code §105.13(e)(1)(x)(B) & §105.17(1)(iii) & §105.21(a)(1)]	Exceptional Value status has been removed from the application materials.
HU 115.	Revise the application to clarify if the exceptional value wetland analysis included all factors listed in 25 Pa Code §105.17(1). If the analysis did not consider all factors, revise it to analyze all factors and update the application. [25 Pa. Code §§105.13(e)(1)(x)(B), 105.17(1)]	The Exceptional Value Wetland analysis is now detailed in Attachment 11, Enclosure E, Part 2 and specifically indicates that the Exceptional Value Wetland analysis included all factors listed in 25 Pa. Code § 105.17(1), including a thorough and detailed analysis of public and private water supply well proximity to the Project; proximity, presence and habitat potential for protected species (dependent on wetland habitats); proximity of wetlands to naturally reproducing trout waters; proximity of wetlands to sections of streams designated "wild" and/or "scenic"; proximity of wetlands to streams designated as "Exceptional Value" in Chapter 93; and proximity of wetlands located in areas designated by DEP as "natural" and/or "wild" within Lands owned by the Commonwealth.
HU 116.	Revise impact Table 3 and the impact plans to correctly identify whether streams are wild trout or not. As presently proposed, no wild trout streams are proposed to be impacted by the project. [25 Pa. Code §§105.21(a)(1), 105.15(a)]	The revised Table 3 in Attachment 11 and aerial site plans in Attachment 7, Tab7A indicate which streams are tributaries to streams where PAFBC has determined there is a naturally reproducing trout population, based on DEP guidance, PAFBC shapefiles, webpages, and communications. No wild trout waters are proposed to be impacted by the Project.
HU 117.	The Mitigation Plan states that for HDD crossings, a telemetry guidance system will be used.	NA – Heading

HU 117.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)]	Telemetry guidance systems for HDDs can include a cable, wire, or other obstructions to be placed in waters of the Commonwealth.
HU 117.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)]	When used, the HDD cable will be aligned along the proposed pipeline centerline (above the drill path); accordingly, the impact calculations and application fees are already accounted for within the application. For HDDs of waters of the Commonwealth where a telemetry guidance system will consist of cables, wires, or other obstructions to be placed in waters of the commonwealth, and as required based on SPLP's coordination with PAFBC, an Aids to Navigation (ATON) Plan has been prepared and provided in Attachment 7B. This plan explains the use and placement of this telemetry guidance system, includes plan and profile drawings, and describes the length of time it will be present in the resource.
HU 117.c.	If cables or other obstructions are proposed over streams, an Aids-To-Navigation (ATON) Plan may be required by the PA Fish and Boat Commission; therefore, if cables or other obstructions are proposed, provide approved ATON plans and approvals and/or documentation from the PA Fish and Boat Commission documenting where ATON plans are not applicable. Contact Thomas Burrell with the Pennsylvania Fish and Boat Commission at 717.705.7838 regarding ATON requirements. [25 Pa. Code §§105.14(b)(6), 105.21(a)(2), 105.14(b)(2)]	For HDDs of waters of the Commonwealth where a telemetry guidance system will consist of cables, wires, or other obstructions to be placed in waters of the commonwealth, and as required based on SPLP's coordination with PA Fish and Boat Commission, an Aids to Navigation (ATON) Plan has been prepared and provided in Attachment 7, Tab 7B.

HU 118.	The impacts described under Section 5.0 of the Mitigation Plan are inconsistent with the impacts provided in the impact tables in the Environmental Assessment. Revise this inconsistency to state the correct impact totals throughout the application. [25 Pa. Code §§105.15(a), 105.21(a)(1), 105.13(e)(1)(i)(ix)]	This document has been adjusted to avoid inconsistencies, and the impacts are now represented in Attachment 11, Enclosure D – Project Impacts, Enclosure E, Part 2 – Project-wide Resource Identification and Project Impacts, and also, the Compensatory Mitigation Plan in Enclosure F.
HU 119.	Provide information about the pump size, flow rate, and duration of use for those open cut crossings (dry crossings) that will use the typical bypass pump-around method. Provide justification for why larger streams do not utilize the proposed flume option. How will aquatic life be able to pass throughout the stream safely? [25 Pa. Code § 105.401(4), 105.13(g)]	The contractor has available one of four crossing methods to facilitate the crossing within the allowable time frames and the conditions of maintaining a dry crossing while maintaining stream flow. The durations of the stream crossings are indicated within the E&S Plan notes and details and within the Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4. With implementation of the duration restrictions and BMP crossing methods the impacts will be minor and temporary as described in Attachment 11, Enclosure D and Attachment 11, Enclosure E, Part 2.
HU 120.	The application states that the period of instream work to install the proposed pipeline(s) will be less than 24 hours in minor waterbodies and 48 hours for crossing of "intermediate" (10-30' across) waterbodies. Describe how these timeframes coincide with the hydrostatic testing procedures outlined in the project description. Do the trenches remain open during testing? To facilitate the further understanding of your project, revise your application to discuss the estimated time installation will take in crossings of wetlands and larger watercourses. [25 Pa. Code § 105.13(e)(1)(iii)]	For the open cut crossings of larger waters, the E&S Plan notes and details provided in Attachment 12 and Impact Avoidance, Minimization, and Mitigation Procedures (Attachment 11, Enclosure E, Part 4) have been revised to indicate that in-stream work to occur in minor water bodies (>10 feet wide) within 24 hours, and in major water bodies (10 to 100 feet wide) within 48 hours. Open-cut streams and wetlands are tested along with the mainline testing and testing would be when the mainline is ready. Stream and wetland crossings are backfilled prior to testing.

HU 121.	Provide an assessment of the functions and values of any additional Exceptional Value wetlands and wetland with impacts over 1 acre. [25 Pa. Code §§105.13(e)(3), 105.15(a)]	Detailed functions and values assessments have been included for all Exceptional Value wetlands regardless of acreage at Attachement 11, Enclosure C.
HU 122.	Enclosure C of the Environmental Assessment discusses the various sections in terms relative to the existing pipeline ROW; however, the proposed ROW does not fully overlap the existing ROW but abuts/parallels the existing ROW. Revise Enclosure C to discuss the functions, habitat, and other factors in Enclosure C outside of the existing ROW and in areas of proposed impact and the overall resources. [25 Pa. Code §§105.13(e)(1)(x), 105.15(a), 105.14(b)(4)]	Attachment 11, Enclosure C has been revised to clarify that there are Project areas that do not completely overlap the existing ROW. The Application, including Attachment 11, Enclosure E, Part 2 discusses all temporary and permanent impacts upon resources as a result of the entire Project, including resources inside and outside the ROW.
HU 123.	Public water supplies are located within in the vicinity of the proposed pipeline. The application states that there will not be any impacts the water supplies as a result of the pipeline. Provide the supporting documentation that led to this conclusion. Locate the public drinking water supplies in the vicinity of the proposed pipeline. Additionally, we recommend that you contact any public water supplier in order to help determine if your project will impact the public water supplier and subsequently provide documentation of interactions, through correspondence, with each supplier. Ensure all Public water supplies in the vicinity of the proposed pipeline are identified within the location map. Enclosed are instructions on how to utilize DEP's eMapPA	Water supply impacts have been analyzed and addressed within three supplemental plans to the PPC Plan, the Water Supply Plan, the IR Plan, and the Void Mitigation Plan for Karst Terrain and Underground Mining. These plans address the elements of this comment, and are provided in Attachment 12.

	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)]	
HU 123.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]	The responses to questions 14, 15, and 16 of the General Information Form in Attachment 1 have been revised to address this comment.
HU 123.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]	Attachment 12, Tab 12B provided a new Water Supply Assessment, Preparedness, Prevention and Contingency Plan, which discusses the potentially affected resources and impacts from water obstructions and encroachments on public water supplies.
HU 123.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)]	The Alternatives Analysis in Attachment 11, Enclosure E, and the Impact, Avoidance, and Minimization, Mitigation Procedures in Attachment 11, Enclosure E, Part 4 have been revised to provide a detailed discussion of alternative routes, designs and methods and to demonstrate that there is no practicable alternative to further avoid and minimize impacts.
HU 124.	The application does not identify if the resources proposed to be affected are part of or located along a private water supply, including surface and groundwater sources. Revise the application and the Environmental Assessment to identify if any of the proposed resources are part of or located along a private water supply.	Water supply impacts have been analyzed and addressed within three supplemental plans to the Preparedness, Prevention, and Contingency Plan (PPC Plan): the Water Supply Plan, the IR Plan, and the Void Mitigation Plan for Karst Terrain and Underground Mining. These supplemental plans are provided in Attachment 12.

	[25 Pa. Code §§105.15(a), Environmental Assessment Form Instructions]	
HU 124.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.	Water supply impacts have been analyzed and addressed within three supplemental plans to the PPC Plan: the Water Supply Plan, the IR Plan, and the Void Mitigation Plan for Karst Terrain and Underground Mining. These supplemental plans are provided in Attachment 12.
HU 124.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.	Attachment 12, Tab 12B includes a Water Supply Assessment, Prevention, Preparedness, and Contingency Plan that addresses potential impacts and describes the procedures to prevent and prepare for resolution of water supply impacts should they occur, including notification procedures.
HU 125.	Section F, Attachment 11, EA Form, Page 2, item 7 states, "Is the water resource part of or located along a private or public water supply?" The Applicant checked "No". However, no documentation validating this statement is provided in the application. The Department is concerned that private and perhaps public water supply wells are located along crossed stream and wetland water resources and/or along the length of the HDD operations. The applicant needs to propose measures to protect all water uses, both surface intakes and groundwater sources, located along and/or downstream of the proposed work areas. Special attention needs to be applied to the potential unplanned impacts that HDD and inadvertent releases (IR) may have on groundwater sources. In addition,	Water supply impacts have been analyzed and addressed within three supplemental plans to the PPC Plan, the Water Supply Plan, the IR Plan, and the Void Mitigation Plan for Karst Terrain and Underground Mining. These plans are provided in Attachment 12 and the EAF revised accordingly. These plans provide instructions and procedures to facilitate the avoidance and minimization of impacts and provides the framework to investigate and resolve impacts caused by spills, releases, and other pollution events should they occur. Applicable public private downstream user information is compiled within the Water Supply plan and identification, notification, and testing procedure for private wells discussed.

	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)].	
HU 126.	Revise Enclosures C & D to discuss the watercourses and wetlands proposed to be impacted and the impacts on them, and not discuss the impacts in general terms of the overall project or general type of impacts. [25 Pa. Code §§105.13(e)(1)(x), §105.15(a)]	Enclosure C of the Environmental Assessment has been revised to provide more detailed discussion of the existing aquatic resources and wetland functions and values within the proposed ROW. Enclosure D of the Environmental Assessment and Attachment 11, Enclosure E, Part 2 have been revised to provide more detailed discussion of the impacts to existing aquatic resources and wetland functions and values within the proposed ROW.
HU 127.	The application states that topsoil will be segregated. Provide a revised Enclosure D of the Environmental Assessment that explains how the topsoil depth will be determined in the field. [25 Pa. Code §§105.15(a), 105.15(b), and Environmental Assessment Instructions]	Topsoil depth varies considerably from site to site and within the site. Accordingly, topsoil depth will be determined in the field by experienced construction contractors by and/or the EI through visual observation.
HU 128.	Revise section D.1 of Enclosure C of the Environmental Assessment to accurately identify that the proposed project will cross State Game Lands 73/118 and 420, but not 198.	Enclosure C has been revised to accurately identify that the Project will cross State Game Lands 71 and 118 in Huntingdon County, but not State Game Land 73 (which is adjacent to 118 in Huntingdon County, but outside the

	[25 Pa. Code §§105.15(a), 105.21(a)(1), 105.13(e)(1)(x), 105.14(b)(5)]	Project area). The Project crosses State Gamelands 198 in Cambria and Blair Counties, but not Huntingdon County. Regarding State Gamelands 420, it is SPLP's understanding that the mapped portion of the State Game Lands 420 that the Project traverses, coincides with land that is Federally-owned and administered by the U.S. Army Corps of Engineers as part of the Raystown Lake Recreational Area property. Therefore, SPLP acknowledges this area as Federal lands instead of State lands, and is seeking the appropriate legal easements from the U.S. Army Corps of Engineers for this area. SPLP has worked with PA Game Commission for the review and issuance of all required license agreements for the Project where it crosses State Game Lands, and PA Game Commission has not indicated that SPLP is required to seek a license agreement for crossing State Game Lands 420. Therefore, SPLP believes this area is under the purview of the USACE/Raystown Lake property.
HU 129.	Revise Section B.1 of Enclosure C of the Environmental Assessment to remove reference to Clover Creek which is not proposed to be impacted and/or is not in Huntingdon County. [25 Pa. Code §§105.15(a), 105.21(a)(1)]	Reference to Clover Creek has been removed from Enclosure C (as it is crossed in Blair County, not Huntingdon County).
HU 130.	Revise Enclosure C of the Environmental Assessment to remove reference to wild trout streams since no wild trout streams are proposed to be impacted in Huntingdon County. [25 Pa Code §§105.15(a), 105.21(a)(1)]	Reference to wild trout streams have been removed from Enclosure C.
HU 131.	Revise Section D of Enclosure C of the Environmental Assessment to identify the recreation in the Raystown Lake National	Enclosure C (Section D.6) has been updated to list the different types of recreational activities available at Raystown Lake Recreational Area.

	Recreation area. [25 Pa. Code §§105.15(a), 105.21(a)(1), 105.13(e)(1)(x), 105.14(b)(5)]	
HU 132.	Update and revise section A.3 of Enclosure D of the Environmental Assessment to discuss any avoidance and minimization measures relative to clearance for the Pennsylvania Historical and Museum Commission. [25 Pa. Code §§105.13(e)(1)(x), 105.15(a), 105.14(b)(5), Environmental Assessment Form Instructions]	Attachment 11, Enclosure D and Attachment 11, Enclosure E, Part 2 have been updated with avoidance and minimization measures relative to PHMC consultations to date.
HU 133.	Revise Enclosure D of the Environmental Assessment to discuss the impacts on the Game Lands and the Raystown Lake National Recreation Area crossed in Huntingdon County by the Water Obstructions and Encroachments, and provide documentation of coordination and approval from the Pennsylvania Game Commission and the U.S. Army Corps of Engineers. As necessary, provide any supporting documentation and/or coordination materials for the approval from the Game Commission and the Army Corps of Engineers. [25 Pa. Code §§105.13(e)(1)(x), 105.15(a), 105.14(b)(5)]	Attachment 11, Enclosure D has been updated to discuss the Project's impacts on State Game Lands and Raystown Lake Recreational Area. With respect to the request to provide supporting documentation/coordination materials, SPLP notes it has been coordinating with the Pennsylvania Game Commission (PGC) and U.S. Army Corps of Engineers (USACE) for more than a year, and has submitted various and voluminous documentation to these agencies and has held regular meetings with these agencies pursuant to license agreements/easements across these lands. This documentation includes Application for Right-of-Way License documents (for PGC) and a Draft Environmental Assessment pursuant to the National Environmental Policy Act (for the USACE). Easements for these properties are anticipated to be issued in December 2016/January 2017. Due to the voluminous nature of documentation SPLP has generated and submitted to these agencies, SPLP has not provided copies in the context of this Chapter 105 application because it is not specifically required. If DEP requests or requires supporting documentation, SPLP invites DEP to provide more direction on specifically what documentation it requests.

HU 134.	Section A.3 of Enclosure D of the Environmental Assessment identifies the Allegheny Portage Railroad of the Pennsylvania Canal in Cumberland County, when it is located in Blair County. Revise this section to be accurate. [25 Pa. Code §§105.13(e)(1)(x), 105.21(a)(1), 105.15(a), 105.14(b)(5)]	Section 11 of the EAF, Enclosure D has been revised to address this comment.
HU 135.	Revise section B.4 d. of Enclosure D of the Environmental Assessment to discuss specific hiking trails which will be temporarily closed and identify their locations within the project boundary. If hiking trails within the project boundary are associated with proposed water obstructions or encroachments, provide a discussion on the impact to the trail, the length of time it is proposed to be closed, plans for signage and detours, and correspondence from any agencies or trail organizations regarding coordination of the closure. [25 Pa. Code §§105.13(e)(1)(x), 105.21(a)(1), 105.15(a), 105.14(b)(5)]	Enclosures C and D have been revised to address specific hiking trails crossed by the Project, whether they are associated with aquatic resources/obstructions/encroachments, and impacts including impact avoidance/minimization measures during construction.
HU 136.	Revise section A.9 of Enclosure D of the Environmental Assessment to discuss and identify impacts to preserved farms and/or farms with agriculture preservation easements or restrictions. Discuss how the minimization measures would affect preserved farms and how they will be affected, such as not being able to replant an orchard or vineyard. [25 Pa. Code §§105.13(e)(1)(x), 105.15(a), 105.14(b)(5), 105.14(b)(4), Environmental Assessment Form Instructions]	Impacts of the Project, which includes an evaluation of water resource impacts, on these designations are provided in Attachment 11, Enclosure D, A.11 and Enclosure E, Part 2.

HU 137.	Enclosure C of the Environmental Assessment mentions that the project crosses the Tussey Mountain Important Bird Area (IBA), but Enclosure D does not discuss the impacts that water obstructions or encroachments may have on this area. Revise Enclosure D of the environmental assessment to discuss the impacts the proposed water obstructions and encroachments will have on this area. In addition, identify if/how the recommendations in the USFWS letter dated June 24, 2016, are being addressed. [25 Pa Code §§105.13(e)(1)(x), 105.14(b)(4), 105.14(b)(5), 105.15(a)]	Enclosure D of Attachment 11 has been revised to address this comment. In addition, to address the June 24 recommendations a Migratory Bird Conservation Plan was submitted to the USFWS in correspondence dated July 15, 2016. That correspondence and plan are included in Attachment 6, Tab 6B.
HU 138.	Revise Section B.1.c. of Enclosure D of the Environmental Assessment to discuss, any avoidance and minimization measures, and committing to implementing them. It currently states that clearances are being worked on. [25 Pa. Code §§105.15(a), 105.14(b)(4), 105.21(a)(1)]	Enclosure D of Attachment 11 has been revised to address the comment and discuss the commitments implementing the avoidance and minimization measures. All clearances and conservation plans for threatened and endangered species on the Project have been received from the regulating agencies. The final avoidance and minimization commitments are detailed in the Project Description as well as within the PNDI documents presented in Attachment 6.
HU 139.	Enclosure C of the Environmental Assessment identifies Biological Diversity Areas and Landscape Conservation Areas within the project area; however, Enclosure D does not discuss potential impacts to these areas. Revise Enclosure D to discuss potential impacts to these areas from the proposed water obstructions and encroachments. [25 Pa. Code §§105.15(a), 105.14(b)(4)]	Enclosure D of Attachment 11 has been updated to discuss the Project's potential impacts on Biological Diversity Areas and Landscape Conservation Areas.

HU 140.	Revise Enclosure D of the Environmental Assessment to explain, on an individual crossing and cumulative basis, why open cut pipe installation combined with permanent ROW maintenance will not result in an adverse impact to exceptional value wetlands or a significant adverse impact to other wetlands. The analysis should include a discussion of potential temporary or permanent impacts to hydrology as a result of the open cut, as well as a loss of woody species in forested/scrub shrub areas. Provide a plan to minimize the risk of permanent impacts to wetland hydrology for each wetland where an impact may occur. [25 PA Code §§105.13(e)(1)(ix) & 105.18a]05.18a]	The Alternatives Analysis provided in Attachment 11, Enclosure E, Part 3 demonstrates SPLP's efforts to avoid and minimize impact to all wetland to the maximum extent practicable. The county-specific Project impacts provided in Attachment 11, Enclosure D and the Project-wide impacts provided in Attachment 11, Enclosure E, Part 2 demonstrate that the impacts to aquatic resources will be minor and temporary. The Project's E&S Plan provided in Attachment 12 and Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4, and Compensatory Mitigation Plan provided in Attachment 11, Enclosure F provide the plans and BMPs that minimize the risk of permanent impacts to wetland hydrology and ensure the impacts are minor and temporary in regards to construction and operations and maintenance of the permanent ROW. Attachment 11, Enclosure E, Part 6 also provides a Cumulative Impacts Assessment.
HU 141.	Revise the description of wetland functions and values to not only include the principle functions and values, but all the functions and values the wetlands provide. [25 Pa. Code §§105.13(e)(2), 105.14(b)(13), 105.15(a)]	All functions and values have been evaluated for all wetlands. The Principal Functions and Values are identified on the Wetland Function-Value Evaluation for Exceptional Value wetlands. In many cases, all functions and values may be Primary; however, secondary functions and values are also identified for each wetland.
HU 142.	Based on the information in the application, it is apparent that wetland functions and values are present in multiple wetlands which have not been identified in the functions and values assessments and descriptions table (ex. wildlife habitat, groundwater discharge/recharge, flood flow alteration, and nutrient removal). Based on the information provided, the functions and	Functions and values have been evaluated consistently throughout all wetlands within the Project area and all applicable functions and values at each wetland have been identified. An updated function and values assessment is included in Attachment 11, Enclosure C.

	values have been applied inconsistently across the wetlands. Re-evaluate and revise the functions and values assessments and descriptions for all wetlands. [25 Pa. Code §§105.13(e)(2), 105.13(e)(3), 105.14(b)(13), 105.15(a), 105.18a(a)(1), 105.18a(b)(1), 105.14(b)(4)]	
HU 143.	Two different wetland function and evaluation forms have been provided for wetland L8 Revise and clarify the application to be accurate and consistent. [25 Pa. Code §§105.13(e)(3), 105.15(a), 105.21(a)(1)]	A single correct functions and values data form for wetland L8 has been provided in Attachment 11, Enclosure C.
HU 144.	Wetlands are located in mapped soils with shallow bedrock and restrictive soil layers (i.e. fragipans), and the application's data sheets and functions and values assessment identifies shallow rock layers, shallow bedrock, and/or restrictive soil layers are present. Also, based on the functions and values descriptions wetlands may contain groundwater discharges, such as springs or may be concave and not connected to groundwater.	Impacts to wetland hydrology associated with open-cut construction vary depending on the wetlands primary source of hydrology, the wetlands position relative to the water table, and the underlying geology/soils (i.e., confining layer and/or fragipans to maintain hydrology). A restrictive layer is a layer in the soil/substratum profile that could slow or prevent the infiltration of water, potentially resulting in a perched water table. Restrictive layers could include, but are not limited to, consolidated bedrock, fragipans, dense glacial till, layers of silt or substantial clay content, strongly contrasting soil textures (e.g., silt over sand), or cemented layers, such as ortstein. In order to minimize impacts to wetlands that depend on a restrictive layer for hydrology, SPLP has conducted a thorough review the mapped soil units in combination with field data to determine if the soil unit has the potential to support fragipan wetlands and if the field data indicated that there was a refusal when characterizing the soils. Refusal is the depth at which a layer inhibiting the ability to dig deeper was reached. Refusal is not always

		indicative of a hydrologically restrictive layer (e.g., high gravel/cobble content, dense tree roots), but could be indicative of a shallow restrictive layer. A refusal layer may still be permeable; whereas, a restrictive layer is impermeable by definition. In wetlands where a confining layer or fragipan has been identified based on SPLP's assessment, or is encountered during the excavation of the trench, SPLP will have Professional Geologist (PG) work with the construction EIs. Specifically, the PG will field review all wetlands areas before and during trenching. During trenching, the PG will advise on the need to segregate confining layers for proper restoration of subsurface conditions following trenched construction. At wetlands determined to require confining layer restoration, the PG will also be on-site during subsurface soil backfilling to ensure proper soil layer restoration. The PG may advise on bentonite sandbag layering along the entire or portions of the trench line at the appropriate height if an identified confining layer cannot be segregated and/or restored. The PG will also provide technical expertise and oversight when karst/openings or groundwater seeps are encountered during trenching activities, and also when the presence of groundwater seeps and drains are encountered within wetland areas. Please see Attachment 11, Enclosure E, Part 2 for the discussion on impacts to hydrology, as well as the Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4 for details on confining layer identification and the SPLP's inspection program, including the provision of a PG.

HU 144.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)]	An evaluation of soils where fragipan soils are located was completed and wetland data was evaluated for wetlands in those areas to identify site specific information to determine if a fragipan was present. Additionally, site specific soil information from wetland data forms for other wetlands within the Project area was reviewed to identify wetlands that had a restrictive layer. That evaluation has been included as part of the Functions and Values table and is located in Attachment 11, Enclosure C.
HU 144.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)]	See response to comment 144.
HU 144.c.	Wetlands W-Y13, W-L17, and W-L16 contain/may contain open water/seasonal inundation, based in the information provided in the application. Provide site specific information on the hydrology and soils and data on why the wetlands maintain open water/seasonal inundation and provide site specific construction plans, cross sections, and restoration details to ensure that the hydrology and functions and values of the wetland is not altered and it continues to maintain inundation	The exact reason why these wetlands maintain open water/seasonal inundation is not confirmed; however, these wetlands appear to be limited to existing field road and existing ROW areas. The construction and restoration methods are the same methods commonly used and standard for the industry, and are described in the Impact Minimization, Avoidance, and Mitigation Procedures (Attachment 11, Enclosure E, Part 4). These standards include adhering to DEP's General Permit 5 - Utility Line Stream Crossings and the USACE's Pennsylvania State Programmatic General Permit – 5

	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)]	requirement that original grades, hydrology, and wetland vegetation must be restored after trenching and backfilling of wetlands, and that any excess fill material must be removed. These performance standards will be adhered to for this Project. These standard stream utility installation crossing methods have been documented to result in successful restoration of cross sections and profiles. Refer to the Project's Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4 for an outline of the BMPs to be implemented and designed to restore wetland hydrology. This includes an environmental inspection program involving a Professional Geologist experienced in hydrogeology as being part of the environmental inspection team on each spread.
HU 145.	Revise the Environmental Assessment to discuss the impacts to each wetland where a vegetative class change is proposed (ex. PFO to PSS). The discussion should be specific to the wetland and its functions and values. [25 Pa. Code §§105.14(b)(4), 105.14(b)(13), 105.14(b)(11), §105.15(a), 105.18a(b), 105.18a(a)]	All impacts to PSS classifications, Project-wide, will be replanted or allowed to revert to PSS wetlands; therefore there will be no conversion of PSS to PEM. In Huntingdon County two wetlands will have 0.046 acre of unavoidable permanent PFO to PEM conversion. The Environmental Assessment has been revised to discuss the impacts to each wetland where a vegetative class change is proposed; the discussion is specific to the wetland, its functions and values, and acreage affected.
HU 146.	The HDD Inadvertent Return Contingency Plan includes profiles identifying Geotechnical profiles; however, no analysis has been provided on the risk of an inadvertent return occurring. Provide an analysis on the risk of an inadvertent return occurring for proposed HDD crossings of Exceptional Value and High Quality Streams, Class A Wild Trout waters,	The revised IR Plan provided in Attachment12, Tab 12C includes an IR risk assessment for each of the HDDs.

	streams and wetlands which are inhabited by threatened or endangered species, streams and wetlands where inadvertent returns have previously occurred, crossings of streams and wetlands adjacent to or located along public water supplies, and streams with karst geology. In addition, provide the analysis for Raystown Lake due to its size. Include in-depth detail, discussion, and data in the analysis of the risk of a return occurring. [25 Pa. Code §§105.14(b)(7), 105.18a(b)(3), 105.18a(b)(4), 105.18a(b)(5), 105.14(b)(4), 105.14(b)(11)]	
HU 147.	Revise Enclosures C&D to assess and discuss the condition of and impacts to forested and scrub shrub riparian areas. Revise the enclosures to discuss the primary impacts and secondary impacts, as well as consideration of antidegradation on watercourses for each watercourse crossing from the riparian vegetation impacts. [25 Pa. Code §§105.15(a), 105.13(E)(1)(x), 105.14(b)(4), 105.14(b)(11), 105.14(b)(12), 105.14(b)(14)]	Attachment 11, Enclosure D discusses primary and secondary impacts to forested and scrub-shrub riparian areas, and Enclosure D has been expanded to include an analysis of Chapter 105 antidegradation requirements related to forested riparian buffer impacts along watercourses crossed by the Project.
HU 147.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]	Riparian areas have been evaluated for each from 100 feet from each bank according to DEP's recommendation. The analysis discussing the effects of the Project on the riparian areas is provided in Attachment 11, Enclosure E, Part 2 (Project-wide Resource Identification and Project Impacts)..
HU 147.b.	To avoid and minimize the impacts to the watercourses, provide a plan to replace the	Except at above ground facilities including valve and pump stations, all previously vegetated temporary and

	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)]	permanent workspaces are restored to a vegetated state in accordance with the E&S Plan provided in Attachment 12. Also the BMPs for restoring and maintenance of these areas are discussed within the Impact Avoidance, Minimization, and Mitigation Procedures found in Attachment 11, Enclosure E, Part 4.
HU 147.c.	Revise the application plan drawings and project description to clearly and specifically state if vegetation clearing, cutting, removal, or other alteration is proposed as part of the proposed projects' construction, operation, and maintenance. Revise the plan drawings to clearly indicate all locations where maintenance clearing, cutting, removal, or other alternation is not part of proposed maintenance activities. [25 Pa. Code §§105.13(e)(1)(ix), 105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.11(d)]	SPLP did not revise the plan drawings. Instead, SPLP revised both the Project Description located in Attachment 9 to define the terms used within the plan drawings such as "Permanent Access Road," "Permanent ROW," "Temporary ROW," and "Additional Temporary Workspace" and the aerial site plans located in Attachment 7, Tab 7A to more clearly depict these designated areas. The Impact Avoidance, Minimization, and Mitigation Procedures in Attachment 11, Enclosure E, Part 4 details the construction, operation, and maintenance procedures in these designated areas. As depicted on the aerial site plans, the DEP Chapter 105 jurisdictional areas defined as "Permanent Impact" are areas where the "Permanent ROW", "Permanent Access Road", "ROW-Travel and Clearing LOD", "Station-LOD", and "Block Valve Setting-LOD" intersect waters of the Commonwealth. These areas will receive both direct and indirect impacts resulting from the placement or construction of a water obstruction or encroachment and include areas necessary for the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water. These

		"Permanent Impacts" areas are proposed for permanent vegetation clearing, cutting, grubbing, removal, and maintenance. However, wetlands will not be cut or mowed during general operation and maintenance. As depicted on the aerial site plans, the DEP Chapter 105 jurisdictional areas defined as "Temporary Impacts" are areas where "Temporary ROW", Additional Temporary Workspace ("ATWS"), "ROW-Travel LOD", and "Temporary Access Road" intersect waters of the Commonwealth. These areas will receive both direct and indirect impacts resulting from the construction of a water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. These "Temporary Impacts" areas are proposed for temporary vegetation cutting, clearing, grubbing, and removal. These areas will be allowed to revert; no future maintenance or operations will occur. The "Permanent Easement" depicted on the aerial site plans identifies the limits of SPLP's agreement with the affected landowner, and is an independent designation from proposed "Permanent Impacts" and "Temporary Impacts". In areas not identified as "Permanent Impacts" or "Temporary Impacts" within the "Permanent Easement", no permanent or temporary vegetation cutting, clearing, grubbing, removal, and/or maintenance is proposed. The "Permanent Easement" is depicted on the aerial site plans in response to previous DEP requests to show the limits of the permanent easement in areas where "Permanent Impacts" and "Temporary Impacts" are not

		proposed, and does not represent a DEP Chapter 105 jurisdictional area.
HU 148.	To aid in evaluating the condition of and change in condition to watercourses and wetlands as discussed in other comments, the Department recommends utilizing the Draft Pennsylvania Riverine Condition Level 2 Rapid Assessment Protocol and the Draft Pennsylvania Wetland Condition Level 2 Rapid Assessment Protocol. These protocols are not for identifying the functions and values of the resources, but rather are utilized to assess the current and proposed conditions of the resources. [25 Pa. Code §§105.14(a), 105.14(b)(4), 105.14(b)(13), 105.14(b)(12), 105.15(a), 105.13(e)(1)(x)]	Conditions of the waterbodies and wetlands have been documented in the Aquatic Resource Reports and Addendums, and within the functions and value assessments. Wetland and stream restoration will be performed at each wetland according to Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4. Each procedure and method of crossing is provided and designed to ensure wetland hydrology, vegetation, soils, and functions and values are restored and each stream bed and bank are restored. Project Impacts are discussed within Attachment 11, Enclosure D and Enclosure E, Part 2 and demonstrate that unavoidable impacts to aquatic resources are temporary and minor.
HU 149.	Section B.2.a of Enclosure D of the Environmental Assessment states the natural drainage patterns of the wetlands and small or headwater streams will be maintained. However, no information has been provided or detailed contours or cross sections depicting the drainage patterns, cross section, or what the drainage patterns are in the wetlands in their existing conditions. Explain how the final "restored" wetland elevations and natural drainage patters of wetlands and streams will be determined. [25 Pa. Code §§105.13(e)(1)(x), 105.14(b)(4), 105.14(b)(11), 105.15(a), 105.18a(a), 105.18a(b)]	Site Specific Plans located in Attachment 7, Tab 7D have been revised to address complex aquatic resource crossings. As recommended by the DEP at a September 12, 2016 technical deficiency meeting, several cross sectional typical details are provided within the E&S Plan Sheets to accommodate the variety of typical stream and wetland crossings.

HU 150.	The Mitigation Plan appears to indicate that streams and wetlands which will be crossed by HDD are not proposed to have vegetative impacts either during construction or during operation and maintenance of the proposed pipelines. However, it is unclear on the plan drawings and in the application narrative precisely if vegetation cutting, clearing, removal, or grubbing is or is not part of the proposed construction, operation, and maintenance. Where Horizontal Directional Drill (HDD) and Bore crossings of resources are proposed a Permanent Easement is identified and impacts are identified as permanent only for the pipe size itself, and at other resource crossings a permanent ROW is identified and impacts are identified as permanent for the entire ROW. No explanation has been provided in the application for this different nomenclature.	SPLP did not revise the plan drawings. Instead, SPLP revised both the Project Description located in Attachment 9 to define the terms used within the plan drawings such as "Permanent Access Road," "Permanent ROW," "Temporary ROW," and "Additional Temporary Workspace" and the aerial site plans located in Attachment 7, Tab 7A to more clearly depict these designated areas. The Impact Avoidance, Minimization, and Mitigation Procedures in Attachment 11, Enclosure E, Part 4 details the construction, operation, and maintenance procedures in these designated areas. As depicted on the aerial site plans, the DEP Chapter 105 jurisdictional areas defined as "Permanent Impact" are areas where the "Permanent ROW", "Permanent Access Road", "ROW-Travel and Clearing LOD", "Station-LOD", and "Block Valve Setting-LOD" intersect waters of the Commonwealth. These areas will receive both direct and indirect impacts resulting from the placement or construction of a water obstruction or encroachment and include areas necessary for the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water. These "Permanent Impacts" areas are proposed for permanent vegetation clearing, cutting, grubbing, removal, and maintenance. However, wetlands will not be cut or mowed during general operation and maintenance. As depicted on the aerial site plans, the DEP Chapter 105 jurisdictional areas defined as "Temporary Impacts" are areas where "Temporary ROW", Additional Temporary Workspace ("ATWS"), "ROW-Travel LOD", and

		"Temporary Access Road" intersect waters of the Commonwealth. These areas will receive both direct and indirect impacts resulting from the construction of a water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. These "Temporary Impacts" areas are proposed for temporary vegetation cutting, clearing, grubbing, and removal. These areas will be allowed to revert; no future maintenance or operations will occur. The "Permanent Easement" depicted on the aerial site plans identifies the limits of SPLP's agreement with the affected landowner, and is an independent designation from proposed "Permanent Impacts" and "Temporary Impacts". In areas not identified as "Permanent Impacts" or "Temporary Impacts" within the "Permanent Easement", no permanent or temporary vegetation cutting, clearing, grubbing, removal, and/or maintenance is proposed. The "Permanent Easement" is depicted on the aerial site plans in response to previous DEP requests to show the limits of the permanent easement in areas where "Permanent Impacts" and "Temporary Impacts" are not proposed, and does not represent a DEP Chapter 105 jurisdictional area.
HU 150.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	SPLP did not revise the plan drawings. Instead, SPLP revised both the Project Description located in Attachment 9 as noted in response to HU 150.

	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)]	
HU 150.b.	Revise the plan drawings to clearly indicate all locations where maintenance clearing, cutting, removal, or other alternation is not part of proposed maintenance activities. [25 Pa. Code §§105.13(e)(1)(ix), 105.13(e)(1)(i), 105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.11(d)]	See response to HU 150.a. In addition, maintenance activities are discussed within the Impact Avoidance, Minimization, and Mitigation Procedures located in Attachment 11, Enclosure E, Part 4.
HU 150.c.	If construction, normal operation, or normal maintenance activities will require the clearing, cutting, removal, or other alteration of the vegetation in or adjacent to the wetland and streams the application must be revised to identify and discuss in detail the primary impacts and secondary impacts to these resources from the proposed project. The application's Environmental Assessment should be revised to discuss the resources and the impacts thereto. Compensatory mitigation may be necessary and required to compensate for impacts to these resources from these impacts. [25 Pa. Code §§105.15(a), 105.13(e)(1)(x), 105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.14(b)(11), 105.13(e)(1)(ix), 105.15(a), 105.18a(a), 105.18a(b)]	As explained in the Project Description (Attachment 9), construction and normal operation and maintenance activities will require the clearing, cutting and mowing of vegetation along areas of the ROW in and adjacent to wetlands and streams. Normal operations and maintenance activities will not involve the removal/denuding of vegetation along the ROW. Attachment 11, Enclosure E, Part 2 (Project-wide Resource Identification and Impacts) discusses direct and secondary impacts to such vegetation as a result of construction and operation/maintenance activities. The permanent impacts to wetland vegetation (i.e., permanent conversion of vegetation cover type) due to normal operation and maintenance activities have been accounted for in the calculation of wetland impacts (Attachment 11, Table 2) and are being mitigated for in the Compensatory Mitigation Plan (Attachment 11, Enclosure F).
HU 151.	The Mitigation Plan implies through mention of "No Mow" signs that PSS and PFO wetlands which will be crossed by open cut methods are not proposed to have vegetative impacts after	The majority of wetland areas will be restored using standard restoration measures outlined within the Impact Avoidance, Minimization, and Mitigation Procedures in Attachment 11, Enclosure E, Part 4. These procedures

	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.	also detail construction, operation, and maintenance procedures in wetlands. The procedures document also includes a "Special Plantings" section that identifies all PFO and PSS impact areas that will be restored through PSS and PFO plantings as well as how these areas are protected during operation.
HU 151.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)]	SPLP did not revise the plan drawings. Instead, SPLP revised both the Project Description located in Attachment 9 to define the terms used within the plan drawings such as "Permanent Access Road," "Permanent ROW," "Temporary ROW," and "Additional Temporary Workspace" and the aerial site plans located in Attachment 7, Tab 7A to more clearly depict these designated areas. The Impact Avoidance, Minimization, and Mitigation Procedures in Attachment 11, Enclosure E, Part 4 details the construction, operation, and maintenance procedures in these designated areas. As depicted on the aerial site plans, the DEP Chapter 105 jurisdictional areas defined as "Permanent Impact" are areas where the "Permanent ROW", "Permanent Access Road", "ROW-Travel and Clearing LOD", "Station-LOD", and "Block Valve Setting-LOD" intersect waters of the Commonwealth. These areas will receive both direct and indirect impacts resulting from the placement or construction of a water obstruction or encroachment and include areas necessary for the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water. These "Permanent Impacts" areas are proposed for permanent

		vegetation clearing, cutting, grubbing, removal, and maintenance. However, wetlands will not be cut or mowed during general operation and maintenance. As depicted on the aerial site plans, the DEP Chapter 105 jurisdictional areas defined as "Temporary Impacts" are areas where "Temporary ROW", Additional Temporary Workspace ("ATWS"), "ROW-Travel LOD", and "Temporary Access Road" intersect waters of the Commonwealth. These areas will receive both direct and indirect impacts resulting from the construction of a water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. These "Temporary Impacts" areas are proposed for temporary vegetation cutting, clearing, grubbing, and removal. These areas will be allowed to revert; no future maintenance or operations will occur. The "Permanent Easement" depicted on the aerial site plans identifies the limits of SPLP's agreement with the affected landowner, and is an independent designation from proposed "Permanent Impacts" and "Temporary Impacts". In areas not identified as "Permanent Impacts" or "Temporary Impacts" within the "Permanent Easement", no permanent or temporary vegetation cutting, clearing, grubbing, removal, and/or maintenance is proposed. The "Permanent Easement" is depicted on the aerial site plans in response to previous DEP requests to show the limits of the permanent easement in areas where "Permanent Impacts" and "Temporary Impacts" are not proposed, and does not represent a DEP Chapter 105 jurisdictional area.

HU 151.b.	Revise the plan drawings to clearly indicate all locations where maintenance clearing, cutting, removal, or other alternation is not part of proposed maintenance activities.[25 Pa. Code §§105.13(e)(1)(ix), 105.13(e)(1)(i), 105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.11(d)]	See response to HU 151a. In addition, maintenance activities are discussed within the Impact Avoidance, Minimization, and Mitigation Procedures located in Attachment 11, Enclosure E, Part 4.
HU 151.c.	If construction, normal operation, or normal maintenance activities will require the clearing, cutting, removal, or other alteration of the vegetation in or adjacent to the wetlands the application must be revised to identify and discuss in detail the primary impacts and secondary impacts to these resources from the proposed project. The application's Environmental Assessment should be revised to discuss the resources and the impacts thereto. Compensatory mitigation may be necessary and required to compensate for impacts to these resources from these impacts. [25 Pa. Code §§105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.15(a), 105.11(d), 105.13(e)(1)(ix), 105.18a(a), 105.18a(b)]	As explained in the Project Description (Attachment 9), construction and normal operation and maintenance activities will require the clearing, cutting and mowing of vegetation along areas of the ROW in and adjacent to wetlands and streams. Normal operations and maintenance activities will not involve the removal/denuding of vegetation along the ROW. Attachment 11, Enclosure E, Part 2 (Project-wide Resource Identification and Impacts) discusses direct and secondary impacts to such vegetation as a result of construction and operation/maintenance activities. The permanent impacts to wetland vegetation (i.e., permanent conversion of vegetation cover type) due to normal operation and maintenance activities have been accounted for in the calculation of wetland impacts (Attachment 11, Table 2) and are being mitigated for in the Compensatory Mitigation Plan (Attachment 11, Enclosure F).
HU 152.	The Mitigation Plan and Environmental Assessment state that conversion of Palustrine Forested Wetlands (PFO) is proposed to occur, that there will be a functional loss, but the loss is de minimus.	Comment is addressed below.
HU 152.a.	Revise the Mitigation plan to replant the PFO wetlands in the permanent and temporary ROW	In conventional lay areas, the pipelines will be trenched to achieve 4 feet of cover. Trees are excluded from the

	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)]	permanent ROW to allow aerial safety inspections, as well as provide access for repair and prevent the pipelines from being compromised by tree growth. However, please refer to the Impact Avoidance, Minimization, and Mitigation Procedures (Attachment 11, Enclosure E, Part 4) that demonstrates additional efforts to maximize PFO restoration within the permanent ROW.
HU 152.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)]	The application has been revised to include restoration plantings in PSS and PFO areas within the permanent ROW to reduce the amount of permanent vegetation covertype conversion in these areas. The total acreage of PFO located in the proposed permanent ROW in Huntingdon County is 0.057 acre across two wetlands. However, SPLP evaluated the opportunity to restore these PFO areas with trees to restore the functions and values of PFO. As a result, Sunoco proposes to replant 0.011 acre of PFO in the permanent ROW with trees. The remaining 0.046 acre of PFO conversion in the permanent ROW is within 10 feet of the pipelines and is not feasible to replant. Therefore, there will be a permanent conversion of PFO to PEM wetlands in Huntingdon County that is limited to 0.046 acre. Given this size of the conversion area and the location centered on the pipeline initial conversion will be to PEM. The application has been revised to include restoration plantings in these areas and the details are provided within the E&S Plan provided in Attachment 12 and in the Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4.
HU 152.c.	The application does not evaluate the cumulative conversion of PFO wetlands for the	A stand-alone alternatives analysis document, which evaluates the cumulative conversion of PFO wetlands for

	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 of approximately 0.528 acres of PFO wetlands. Based on the Department's review of the impacts for PFO wetlands, compensatory mitigation is required to offset the identified PFO functional impacts of conversion to PSS. Revise the application to assess the impact to the effected forested wetlands, evaluate the cumulative effect on all counties of the proposed project, and provide compensatory replacement for the lost functions and values. [25 Pa. Code §§105.13(e)(1)(ix), 105.13(e)(1)(viii), 105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.15(a), 105.18a(a), 105.18a(b), 105.20a(a)(2)]	the entire project, has been added to the application materials and is located in Attachment 11, Enclosure E, Part 2. The stand-alone compensatory mitigation plan has been revised and is located in Attachment 11, Enclosure F.
HU 153.	The application states that temporarily impacted Palustrine Scrub Shrub (PSS) and PFO wetlands will be replanted with native trees and shrubs, PSS wetlands in the permanent ROW will be planted with wetland shrubs, and PFO wetlands in the permanent ROW will be allowed to revert to PSS/PEM wetlands. Provide planting plans and details for these areas and for the replanting of PFO areas in the permanent and temporary ROWs. The planting plans must identify the locations of the plantings and wetlands, the species to be planted, the planting density, the proposed size of the plantings, planting timing, goals and	The planting plans for the restoration of PSS and PFO areas is provided in the Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4. The procedures provide for the locations, species to be planted, density, size, timing, goals, and objectives, and monitoring for successful restoration.

	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]	
HU 154.	Section 2.2.2.1 of the Mitigation Plan, Construction in Wetlands with Unsaturated Soils, conflicts with the rest of the application, which identifies that all wetland crossings will be crossed with mats or pads. Crossing unsaturated wetlands without timber mats would contribute to soil compaction, rutting, and disturbance of the cut vegetation's roots. Therefore, revise the Mitigation Plan to identify that all wetland crossings shall use mats or pads. [25 Pa. Code §§105.21(a)(1), 105.13(e)(1)(ix), 105.15(a), 105.18a(a), 105.18a(b)]	The Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4 has been revised to indicate that temporary wetland matting will be used along the travel lane where any staging or work areas are proposed in wetlands regardless of the wetlands saturated condition.
HU 155.	Section 2.2.2.1 of the Mitigation Plan identifies that wetlands will be reseeded with a native wetland seed mixture; however, the mixture is not specified nor is it proposed on the plans. Revise the application to identify the seed mixture to be used and revise the E&S plans to indicate its use for wetland restoration in the Typical Wetland Restoration detail. [25 Pa. Code §§105.13(e)(1)(ix), 105.14(b)(4), 105.14(b)(13)]	The Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4 includes the details for standard and site-specific (including restored PSS and PFO habitats) wetland restoration, as well as invasive species control, monitoring, and reporting.
HU 156.	The HDD list at the end of the Inadvertent Return Contingency Plan in the Mitigation Plan identifies HDD crossings with notes as "Drive Through – Travel Only" which are not identified on the plan drawings or applications	The HDD list in the IR Plan, the plan drawings, and the application have been updated to contain this information. The revised plan is provided in Attachment 12, Tab 12C.

	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)]	
HU 157.	The Alternatives Analysis states that the Alternatives Analysis is meant to be a summary of major actions taken to avoid/minimize impacts. The Alternatives Analysis must be a detailed analysis of alternatives, including alternative locations, routings, or designs to avoid or minimize adverse impacts and document and provide evidence that there is no practicable alternative which would not involve a wetland or that would have less adverse impact on a wetland. In addition, for the project to be water dependent as stated in the Alternatives Analysis, it must be based on the demonstrated unavailability of any alternative route location, or design or use of location, route or design to avoid or minimize adverse impacts. Revise the Alternatives Analysis to provide a detailed analysis of alternative routings, locations, and designs to avoid and minimize impacts and provide detailed documentation and evidence that there are not practicable alternatives which would further avoid and minimize impacts. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a(a)(2), 105.18a(a)(3), 105.18a(b)(2), 105.18a(b)(3)]	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to provide a detailed analysis of alternative routings, locations, and designs to avoid and minimize impacts and to provide documentation/evidence that there are no practicable alternatives that would further avoid and minimize impacts.

	In addition, address the following specific comments regarding the Alternatives Analysis:	
HU 157.a.	The Alternatives Analysis states that the proposed project was co-located within an existing pipeline for the majority of the route. However, multiple deviations away from the existing Sunoco pipeline occur within Huntingdon County and no information, details, or documentation on why the route deviated away from the existing ROW was given, or on alternate route selection to avoid and minimize impacts. Provide a detailed alternatives analysis which contains evidence and documentation on potential and avoided impacts for the existing alignment, proposed alignment, and other potential route alignments which documents that impacts cannot be further avoided and minimized. The following route alignments in Huntingdon County have been identified which deviate widely from the existing Sunoco ROW: The stream S-L51 to Raystown Road route deviation; and the steam S-L57 to stream S-L16 route deviation. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7), 105.18a(a), 105.18a(b), 105.14(b)(4), 105.14(b)(5), 105.14(b)(13)]	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
HU 157.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	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.

	watersheds.[25 Pa. Code §§105.14(b)(7), 105.13(e)(1)(viii)]	
HU 157.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)]	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
HU 157.d.	Some portions of the proposed ROW and pipelines directly abuts the maintenance corridor of the existing Sunoco pipeline; however, in other portions the proposed ROW has partial or near complete overlap with the existing maintenance area and pipeline. No discussion on this is provided in the alternatives analysis, and it appears that more overlap of the proposed ROW and the existing Sunoco Maintenance corridor is practicable and would further avoid and minimize impacts. Revise the application accordingly to avoid and minimize impacts by locating the proposed ROW within the overlap of the existing maintenance corridor, or provide a detailed analysis and discussion with specific details explaining why this overlap is present in some areas and not others, and why the proposed ROW cannot further overlap. [25 Pa. Code §§105.14(b)(7), 105.13(e)(1)(viii), 105.18a(a), 105.18a(b)]	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
HU 157.d.	It appears that several waters of the Commonwealth could be crossed using trenchless installation methods. Revise the application accordingly, or provide a revised alternatives analysis that incorporates a	The Alternatives Analysis provided in Attachment 11, Enclosure E, Part 3 has been revised to include a discussion on the limitations of trenchless methods and presents an attached trenchless feasibility assessment.

	discussion of alternative crossing techniques (conventional bore, HDD, micro-tunneling, etc.) that includes documentation and evidence addressing each resource crossing and explaining why trenchless installation methods are not appropriate. [25 Pa. Code §§105.14(b)(7), 105.18a(b)(3), 105.18a(a)(3), 105.13(e)(1)(viii)]	
HU 157.e.	The Alternatives Analysis in Route Variation 6 identifies that the pipeline has been re-routed to avoid installation of the pipes paralleling down the middle of the stream. Other stream impacts are proposed where the proposed pipes will parallel down the stream channel, where the stream flows in and along the pipes and ROW, and where streams begin within the proposed ROW; however, no information has been provided on why these impacts cannot be avoided and/or minimized through route changes. It appears that many of these areas can have impacts further avoided and minimized. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs, and methods to avoid and minimize impacts and which documents and provides evidence that other routes and designs would not further avoid or minimize impacts for the following streams: S-M2, S-L16, S-L15, S-L13, S-L21, S-L51, S-L52, S-L53, S-Y19, S-JH2, S-BB106, S-L48, S-L42 within wetland L24, S-L25, S-M17, S-L34, S-M9, M11, S-K82, and S-K85 S-M18,	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.

	S-M20, S-M4, S-BB97, S-M22, S-K89, and S-K8. [25 Pa. Code §§105.14(b)(7), 105.14(b)(4), 105.14(b)(11), 105.15(a)]	
HU 157.f.	It appears that impacts to wetland Y14 could be avoided and minimized by re-locating the alignment to the North. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
HU 157.g.	It appears that secondary impact to stream S-Y3 could be avoided and minimized by lengthening the HDD location and beginning it further to the East and lengthening the “Permanent Easement (no surface disturbance)”. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7)]	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
HU 157.h.	It appears that impacts to streams S-Y5, S-Y6, S-Y7 and wetlands Y6, Y7, and CC28 could be avoided and minimized by locating the proposed pipelines further North. Revise the application accordingly to avoid and minimize	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.

	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)]	
HU 157.i.	It appears that impacts to wetland Y12 and streams S-Y19 and S-JH2 could be avoided and minimized by locating the proposed pipelines to the Southeast. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
HU 157.j.	It appears that impacts to wetland L28 could be avoided by relocating the proposed pipelines to the North or the South. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
HU 157.k.	It appears, but is not described in the application, that HDD was assumed by the	A stand-alone alternatives analysis document, which presents the justification for the selected wetland and

	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)]	stream crossings that will be made by HDD, has been added to the application materials and is located in Attachment 11, Enclosure E, Part 3. The alternatives analysis includes and incorporates relevant information by reference presented in a stand-alone trenchless feasibility assessment, which is located in Attachment 11, Enclosure E, Part 3, Appendix C.
HU 157.l.	It appears that primary impacts and secondary impacts from the Temporary ROW and ATWSs can be avoided by locating them outside the floodway of streams. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7)]	As demonstrated in the Alternatives Analysis, the Project has been designed to avoid and minimize impacts to wetlands and waterbodies (including streams and floodways of streams) to the extent feasible. SPLP has narrowed the Project ROW from 75 to 50 feet at resource crossings, and therefore necessarily relocated temporary workspace (including Temporary ROW and ATWSs) adjacent to streams (and/or floodways) in order to install the pipeline effectively and to restore disturbed workspace as efficiently as possible. Furthermore, the Project would implement E&S controls during construction and primary and secondary impacts at these workspaces would be temporary in nature and restored to existing conditions. Please refer to Attachment 11, Enclosure D, Project Impacts for additional discussion.
HU 157.m.	It appears that locating the pipelines to the South would avoid impacts to streams S-L45, S-L42, wetland L21, and Pond I4. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize	Wetland (Pond I4) and stream (S-L45) are proposed to be crossed using HDD methods. Therefore, there will be no disturbance in this wetland and stream and impacts to the wetland and stream will be avoided. The waterbody acreage impacts that are listed in the waterbody impacts table (Attachment 11, Table 3), represents calculations of the pipe width multiplied by the length of the crossing

	impacts. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]	under the stream per DEP's guidance, and not actual disturbance. Wetland L21, and Stream S-L42 are addressed in the Alternatives Analysis in Attachment 11, Enclosure E, Part 3.
HU 157.n.	It appears that primary impacts and secondary impacts could be avoided and minimized by locating the proposed pipelines South of stream S-M28, and if this is not practicable, minimize impacts by crossing it farther downstream/Northeast in a perpendicular fashion. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7)]	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
HU 157.o.	It appears that impacts to streams S-M20 and S-M18 and wetlands M17 and M15 could be avoided and minimized by relocating the proposed pipelines to cross the streams farther upstream and in a more perpendicular fashion to rejoin Sunoco's existing ROW farther West. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.

	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]	
HU 157.p.	It appears that impacts to wetlands M12 and CC27 can be avoided and minimized by locating the proposed pipelines on the North side of the Existing Sunoco pipeline. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
HU 157.q.	It appears that impacts to wetland L12 could be avoided or minimized by locating the proposed pipelines South of the existing Sunoco pipeline. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
HU 157.r.	It appears that impacts to wetlands K72 and L10 and stream S-L21 and the floodway of stream S-K96 could be avoided and minimized by locating the proposed pipelines South of the existing Sunoco pipeline. Revise the application accordingly to avoid and minimize impacts, or	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.

	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]	
HU 157.s.	The following pertain to the Alternatives Analysis' for wetlands L7, L8, L9,W332, and W333.The analysis states that an alignment further South or North than that proposed would increase undisturbed forest habitat including potentially other streams/wetlands. The proposed re-route around wetland L7 will require additional forest clearing, and no justification and documentation has been provided on why it is practicable in this instance and not in the rest. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. This should include specific details and quantification which documents that other routes and designs would not further avoid or minimize impacts .[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
HU 157.s.i	It appears that relocating the proposed pipelines' alignment North of wetland L8 and/or North of stream S-L16 could avoid and	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.

	minimize impacts and cross S-L16 in a more perpendicular manner.	
HU 157.s.ii	It appears that locating the proposed pipelines South of the existing Sunoco Pipeline from the point West of wetland L6 where the proposed pipelines rejoin the existing through stream crossing S-L13 could avoid wetland impacts and avoid and minimize stream impacts and cross the streams in a more perpendicular manner.	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
HU 157.t.	The Alternatives Analysis states that a combination of open cutting and HDD was determined to be the most feasible alternative for crossing wetlands K67 and K68; however, no details, documentation, or evidence has been provided on why this is the least damaging practicable alternative. It appears that lengthening the HDD to cross both wetland K67 and K68 and not open cut wetland K67 would further minimize impacts. Revise the application accordingly to avoid and minimize impacts, or provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impacts. This should include specific details and quantification which documents that other routes and designs would not further avoid or minimize impacts[25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.

HU 157.u.	Stream K-89 starts at its source between the two proposed pipelines. Also, based on the provided photograph, it appears the stream has at least intermittent if not perennial flow. Revise the stream flow regime accordingly. It appears relocating the proposed pipelines to the North could avoid this impact. Revise the application accordingly to avoid and minimize impacts, and provide a detailed analysis of alternative routes, designs and methods to avoid and minimize these impacts which documents and provides evidence that other routes and designs would not further avoid or minimize impact. [25 Pa Code §§105.14(b)(7), 105.14(b)(4), 105.13(e)(1)(viii), 105.16(a), 105.16(d)]	Where K-89 starts has been verified to be ephemeral flow. The constraints of moving the pipeline north or south of the existing ROW is discussed within the Alternatives Analysis provided in Attachment 11, Enclosure E, Part 3.
HU 157.u.i	If the impact cannot be avoided, provide a detailed discussion, assessment, and analysis on the existing hydrology and on the impacts to the proposed stream and how it will be restored. The analysis should specifically discuss the source of hydrology for the stream and how it will be restored after the pipelines are installed, include a geologic analysis on the impact to the stream hydrology if the source is emanating from the bedrock, and include a plan to monitor the stream post construction. [25 Pa Code §§105.16(a), 105.15(a), 105.13(e)(1)(ix)]	A site-specific drawing is provided within Attachment 12 within the E&S Plan sheet set. The drawings provide for plans for the existing, E&S Plan, and restoration condition. Also see the Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4 for a detailed discussion in regards to SPLP's environmental inspection program that provides for a PG to be part of the EI team per spread to consult in regards to karst terrain, groundwater seeps, and confining layers.
HU 157.u.ii	If impacts to the hydrology will result and/or hydrology lost from the proposed impacts, provide a detailed plan for compensatory mitigation for these impacts. [25 Pa Code §§105.13(e)(1)(ix), 105.1, 105.16(a)]	The Resource Identification and Project Impacts provided in Attachment 11, Enclosure E, Part 2 discuss the impacts on hydrology. Based on the construction BMPs and the site specific restoration plan provided in Attachment 7, Tab 7C no significant or permanent impact on stream K-

		89's hydrology is expected. Compensatory mitigation is therefore not warranted.
HU 157.e. Incorrectly numbered in DEP ltr	The Alternatives Analysis discussion on alternatives to avoid and minimize impacts for wetlands K65 and K66 by shifting the pipelines North or South would cause more disturbance of previously undisturbed habitat, including potentially other wetlands and streams. However, no information or detail has been provided on whether the possibility of alternatively shifting the alignment North or South will actually impact any additional wetlands and streams or increase the quantity of impacts. Revise the alternatives analysis to include specific details and quantification providing a detailed analysis of alternative routes, designs and methods to avoid and, minimize impacts to wetlands and streams which documents that other routes and designs would not further avoid or minimize impacts. [25 Pa. Code §§105.13(e)(1)(viii), 105.14(b)(7) , 105.18a]	The Alternatives Analysis provided in Attachment 11, Enclosure E, Part 3 has been revised to include additional discussion of alternatives assessed for wetlands (including K65 and K66) is included in Attachment 11, Enclosure E, Part 3. It can be found in Appendix D.
HU 149. Incorrectly numbered in DEP ltr	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)]	The attached Application represents the proposed facilities and workspaces. SPLP provided in each Chapter 105 county application package a summary of the PNDI correspondences to-date as Attachment 6. In that summary, a description of the 1,500 foot-wide review area that was used for the initial correspondences and how reroutes deviating from the 1,500 foot width were resubmitted, such as the case of the Altoona reroute area in Cambria and Blair counties. Changes to the Project since receipt of these

		correspondences remain within the 1,500 reviewed corridor. Each agency has been submitted a final request for determination letter where the Project is describe as two lines, the consultation history is summarized, and survey reports and mapping (including GIS files) are provided referencing the most current alignment. Conservation measures and construction commitments are then outlined within a species-specific conservation plans and a no impact determination is requested. Clearance from all four agencies have been obtained and the conditions of those clearances outlined within the revised Project Description located in Attachment 9, which includes all approved conservation plans. Attachment 6 also contains all of the PNDI agency correspondences to-date.
HU 158.	Provide consistent and up-to-date plans to the Department and Penn, Shirley, Union and Tell Townships. [25 Pa. Code § 105.21(a)(1) § 105.13(e)(1)(v) and (vi) § 105.13(e)(1)(i)(A) and (C)]	This comment requests that floodplain maps and site plans be resubmitted to the Department, Penn, Shirley, Union, and Tell Townships as a result of the updates to the Project's workspace. Updated site plans are provided in Tab 7A of this Chapter 105 permit application. In addition, Per DEP's request, updated plans/maps and a letter requesting comment (on the changes to the workspace) were sent to the Townships. See updated plans/maps sent to Townships in Attachment 14.
HU 159.	Please respond to and address the comments from the Pennsylvania Fish and Boat Commission found on the attached sheet. Due to the number of crossings and time-of-year restrictions, the Department recommends identifying the time-of-year restrictions on the plans. [25 Pa. Code §§105.14(b)(4), 105.14(b)(6)]]	To ensure contractor compliance, SPLP has developed a state-of-the-art web-based mapping applications that is required to be used by the contractor to determine all special environmental restrictions such as PNDI and trout stream restrictions. All of the restrictions and avoidance measures committed to and approved by PNDI agencies are included in the Project Description within a summary table and within the PNDI agency final determination

		letters and accepted Conservation Plans included in Attachment 6, Tab B. The same notes in the Project Description are reflected within the E&S Plan notes. Trout stream restrictions and other sensitive species restrictions are also noted on aerial site plans and E&S Plans, however due to the senstive nature of the some of the information not all is depicted. SPLP will implement a comprehensive Environmental Training and Inspection program designed specifically to ensure contractors are appropriate notified and are adhering to such restrictions.

SPLP appreciates your timely review of the revision. Please contact Sandy Lare of Tetra Tech, Inc. with any questions at 716-849-9419, or email sandy.lare@tetratech.com.

Sincerely,
Tetra Tech, Inc.

Sandra J. Lare
Environmental Planner/Permitting Specialist

Enclosures: Revised Chapter 105 Joint Permit Application

cc: Ann Roda, DEP Headquarters / Program Integration (letter only)
Sachin Shankar, DEP Southeast Region (letter only)
Dominic Rocco, DEP Southeast Region (letter only)
Jared Pritts, U.S. Army Corps of Engineers, Pittsburgh District (letter only)
Wade Chandler, U.S. Army Corps of Engineers, Baltimore District (letter only)
Sam Reynolds, U.S. Army Corps of Engineers, Philly District (letter only)
Monica Styles, Sunoco Logistics
Matthew Gordon, Sunoco Logistics
Christopher Embry, Sunoco Logistics
Brad Schaeffer, Tetra Tech, Inc.