



December 2, 2016

By FEDERAL EXPRESS

Mr. Gregory W. Holesh, P.E.
Environmental Group Manager
Pennsylvania Department of Environmental Protection – Southwest Regional Office
Permitting and Technical Services Section
400 Waterfront Drive
Pittsburgh, PA 15222

Re: DEP File E32-508
Technical Deficiency Response
Chapter 105 Dam Safety and Waterway Management Joint Permit Application
Sunoco Pipeline L.P. – Pennsylvania Pipeline Project (Mariner East II)
Burrell, West Wheatfield, and East Wheatfield Townships, Indiana County

Dear Mr. Holesh:

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 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 the previously submitted aquatic resource reports as part of this application revision. We are providing two hard copies and three 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.

Comments and Responses to September 6, 2016 Technical Deficiency Letter 2

IN 1	The Application was signed and certified by Matthew L. Gordon as the “Principal Engineer”. Per the instructions for the Pennsylvania Water Obstruction and Encroachment Permit Application, an application from a partnership shall be signed by one or more members authorized to sign on behalf of an entire partnership. Provide documentation that Mr. Gordon is authorized to sign the Application on behalf of the entire partnership or have the proper partner(s) sign the application. 25 Pa. Code §105.13(g)	A “Delegation of Authority” letter authorizing Mr. Gordon to sign the Application on behalf of the partnership is provided in Attachment 1 of the Application.
IN 2	The previous Technical Deficiency Letter requested a copy of your Preparedness Prevention Contingency (PPC) Plan to protect against potential impacts, including, but not limited to, potential impacts to public and private water supplies. 25 Pa Code § 91.33(b) Regarding these plans:	NA - Heading
IN 2.a	The application includes separate documents covering PPC activities. Due to the scope of this project, you must consolidate these plans into one stand-alone document that can be used in the field. This plan must also be consistent in your Erosion and Sediment Control permit application. 25 Pa. Code §§ 105.13(g) and 105.301(10)	The Preparedness, Prevention, and Contingency Plan (PPC Plan) has been updated to be applicable Project-wide, and is the overarching plan to three supplemental plans: the Water Supply Assessment, Preparedness Prevention and Contingency Plan (PPC Plan), the Inadvertent Return Assessment, Preparedness, Prevention and Contingency Plan (IR Plan), and the Void Mitigation Plan for Karst Terrain and Underground Mining. Due to the size and distinct subject matters of each plan, these three plans are separate but reference each other and work together to provide protection to on-site and off-site water resources. These plans are found in Attachment 12 of this application and are also consistent and part of the Chapter 102 application.

<p>IN 2.b</p>	<p>In a letter dated June 24, 2016, regarding the northeastern bulrush, the U.S. Fish and Wildlife Service stated, “As a means to minimize impacts should an IR occur, you provided an HDD Inadvertent Release Contingency Plan. In addition to the instructions in this Plan, please add the USFWS phone number as an agency to be contacted should an IR occur, and inform the HDD contractor about the sensitive nature of the drill at this location.” Revise your Contingency Plan to incorporate this information. 25 Pa. Code §105.13(e)(1)(x)</p>	<p>A comprehensive and complete contact list (including USFWS phone number) has been added to the IR Plan provided in Attachment 12, Tab 12C. The Horizontal Directional Drilling (HDD) contractor will be informed of sensitive areas through the Environmental Inspection training program, which is discussed within the IR Plan.</p>
<p>IN 2.c</p>	<p>The Pennsylvania Fish and Boat Commission Law Enforcement Section should be included in the list of agencies to be contacted should an inadvertent return occur. 25 Pa. Code §105.13(e)(1)(x)</p>	<p>A comprehensive and complete contact list (including the Pennsylvania Fish and Boat Commission [PAFBC] Law Enforcement Section) has been added to the IR Plan provided in Attachment 12, Tab 12C.</p>
<p>IN 2.d</p>	<p>While you provided a narrative discussing how impacts to private water supplies will be investigated and addressed, a formal plan has not been provided. As such, revise your PPC Plan to include the following: 25 Pa Code § 91.33(b)</p>	<p>NA - Heading</p>
<p>IN 2.d.i</p>	<p>Measures the applicant will take to investigate for the presence of private water supplies in areas where HDD crossings are proposed. 25 Pa. Code §105.13(e)(1)(x)</p>	<p>Potential impacts to private water supplies in areas where HDD crossings are proposed have been analyzed and addressed within three supplemental plans to the PPC Plan, the Water Supply Assessment, Preparedness Prevention and Contingency Plan, the IR Plan, and the Void Mitigation Plan for Karst Terrain and Underground Mining. These plans are provided in Attachment 12.</p>

IN 2.d.ii	Procedures that will be followed to investigate and resolve impacts to private water supplies should they occur as a result of the proposed activities. This procedure should discuss how private water supply owners will be alerted in the event of an inadvertent return. 25 Pa. Code §105.13(e)(1)(x)	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.
IN 2.e	The application states, “SPLP plans to use the FERC standards in accepting and investigating landowner complaints of spring and well water supply impairment.” Provide a copy of these FERC standards and incorporate the FERC standards into your PPC Plan for Department review. 25 Pa. Code §105.13(e)(1)(x)	The PPC Plan has been revised to remove the reference to FERC standards in accepting and investigating landowner complaints of spring and well water supply impairment. A separate, stand-alone Water Supply Assessment, Prevention, Preparedness, and Contingency Plan has been prepared that details the procedures and standards for accepting and investigating landowner complaints regarding spring and well water supply impairment. This Water Supply Assessment, Prevention, Preparedness, and Contingency Plan is provided in Attachment 12, Tab 12B.
IN 2.f	The Plan should address management of excess drilling mud/liquids that may be encountered at the individual bore pits. 25 Pa. Code § 105.1(e)(1)(x)	The PPC Plan and the IR Plan were updated to include standard operating procedures that address management of excess drilling muds/liquids encountered at individual HDD sites. These plans are provided in Attachment 12.
IN 3	Regarding the proposed HDD resource crossings:	NA - Heading
IN 3.g **skipped a-f	The HDD Inadvertent Return Contingency Plan contains no analysis concerning the risk of an inadvertent return. Provide an analysis of the risk of an inadvertent return occurring for all proposed HDD crossings. Include in-depth detail, discussion, and data in the analysis of the risk of a return occurring. 25 Pa Code §§ 105.14(b)(4) and 105.14(b)(11)	The revised IR Plan provided in Attachment 12C includes an inadvertent return risk assessment for each of the HDD crossings.

IN 3.h	<p>The Department recommends that a qualified, licensed geologist and applicant representative be on-site while HDD crossings are being conducted. If a geologist will be on-site, please include in your PPC Plan the minimum qualifications and experience of the individual(s), and consider revising plans to include these measures. Otherwise provide a detailed analysis and risk assessment regarding response time should an inadvertent return occur and associated damages that could result due to these delays. 25 Pa. Code §105.301(10), and 25 Pa Code § 91.33(b)</p>	<p>A geologist has been involved with the planning of HDDs since the Project beginning. The HDD risk assessment attached to the revised IR Plan, includes a geological investigation, including geotechnical borings. The HDDs have been designed to minimize and reduce the potential for inadvertent return to the maximum extent practicable. The IR Plan has been revised to provide for a Professional Geologist to be part of the Environmental Inspection Team per spread.</p> <p>The required qualifications for the geologist are listed within the revised IR Plan. The contractor will continuously monitor its HDD fluid pressure and make adjustments and/or respond directly in the event of inadvertent return.</p>
IN 3.i	<p>Since these pipelines are located in such close proximity to existing pipelines, thus areas which may have been previously impacted, we request that a geologic evaluation be conducted where any prior disturbance from boring or trenching occurred within the area of a proposed HDD or open trench location. Provide a narrative that discusses how your evaluation and the resulting adjustments that should be made in these specific areas (e.g. boring deeper if the proposed HDD is within an area that may have been affected, such as by the creation of fractures, from past borings). An example of particular concern is the HDD boring underneath the Youghiogheny River. The previous ME1 HDD records from all HDD borings should be evaluated and considered in determining any necessary adjustments to the proposed ME2 HDD boring plan. 25 Pa. Code §105.301(10)</p>	<p>All as-built conditions for the ME1 Projects, including the 12-inch Houston to Delmont installation and the 8-inch repair project were used to carefully plan the horizontal and vertical installation of the PPP pipeline HDDs. In addition, all foreign and other SPLP lines were identified and plans obtained to identify the horizontal and vertical locations of these existing lines. Previous IRs were also known to engineers and that information along with the geotechnical borings, geology of the area, and existing line plans formed the knowledge base for this careful planning. IR risk assessments have been added to the revised IR Plan provided in Attachment 12, Tab 12C to further add to the integrity of the installation plans without compromising other lines or posing additional risks to ground and surface waters.</p>

IN 3.j	As a recommendation, a qualified licensed geologist should be working with the HDD contractor conducting pre-boring evaluations to address the assessment of potential impacts to local public and private drinking water supplies and aquifers. This should be a stand-alone document. The geologist's qualifications and experience requirements should be included in the HDD Evaluation Plan discussed in comment 2.d, below. 25 Pa. Code §105.301(10), and 25 Pa Code § 91.33(b)	Potential impacts to local public and private drinking water supplies and aquifers are discussed within the stand-alone Water Supply Assessment, Prevention, Preparedness, and Contingency Plan provided in Attachment 12. A geologist has been involved with the planning of HDDs since the Project beginning. The HDD risk assessment attached to the revised IR Plan, includes a geological investigation, including geotechnical borings. The HDDs have been designed to minimize and reduce the potential for inadvertent return to the maximum extent practicable. The IR Plan has been revised to provide for a Professional Geologist to be part of the Environmental Inspection Team per spread. The required qualifications for the geologist are listed within the revised IR Plan.
IN 3.k	An HDD Evaluation Plan should be created to address the pre-boring geologic evaluation of the existence and potential to impact local public and private drinking water supplies and aquifers within a specified radius of the boring location. The plan needs to include what measures will be employed to prevent such impacts and then to verify that no supplies or aquifers have been impacted (e.g., pre- and post-boring water quality and quantity analyses). The PPC Plan should specify what notifications and remediation measures will be employed if there are impacts. 25 Pa. Code §105.301(10)	The Water Supply Plan provides for the assessment of the existing public and private water supplies in or along the Project, as well as identifies prevention and preparedness measures to be implemented to protect those supplies. The IR Plan outlines the preconstruction activities implemented to ensure competent 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.
IN 3.l	Provide the minimum qualifications and experience for the contractors that will be performing the HDD crossings. 25 Pa. Code §105.301(10)	The minimum qualifications are provided within the IR Plan provided in Attachment 12.

IN 3.m	<p>The mitigation plan states that a telemetry guidance system will be used for HDD crossings. Revise the application to identify whether this method will require cables, wires, or other obstructions to be placed in waters of the Commonwealth. If obstructions are to be placed in waters of the Commonwealth, ensure the associated impacts are accounted for in the application, and provide plan drawings, cross sections, and a description of the length of time that these obstructions will be present in the resource. If cables or other obstructions are proposed in navigable waters, contact Thomas Burrell of the PA Fish and Boat Commission at 717-705-7838 to discuss whether an Aids-To-Navigation (ATON) plan will be required. Documentation should be provided that coordination with PFBC has been conducted regarding this ATON plan. 25 Pa. Code §§105.13(e)(1)(iii) and 105.23</p>	<p>The telemetry guidance system requires a 4-6 gauge wire to be strung along the HDD alignment to allow for accurate drill head tracking. This is laid on the surface of the uplands and along the bottom of streams and waterbodies and would follow the surface and bottom elevation profile shown within each HDD drawing. SPLP will prepare and submit for approval from the PAFBC Aids to Navigation Plans (ATON plans) for the stringing of the telemetry wire for those water crossings with potential for recreational or commercial navigation. SPLP has identified those crossings that require ATON plans through consultations with PAFBC (i.e., Thomas Burrell). The ATON plans for those crossings and status of PAFBC approval are provided with the HDD drawing set located in Attachment 7; Tab 7B. The duration would be for the entire drill process which would vary greatly within each drill site and across the Project. The impact is accounted for within the aquatic resource tables located in Attachment 11.</p>
IN 3.n	<p>Provide information and details regarding previous HDD activities on the Mariner East I pipeline project where inadvertent returns occurred. At a minimum, this should include: a complete list of all occurrences of inadvertent returns, topographic maps with the location, latitude and longitude of each occurrence, description of the event, the amount of discharge, whether the discharge entered waterways and wetlands, the mitigation and clean up measures taken, and details of your investigation and conclusions as to the cause of each event. 25 Pa. Code §§105.13(e)(1)(viii), (ix) and (x)</p>	<p>An HDD Risk Assessment is included as part of the revised Inadvertent Return Assessment, Prevention, Preparedness and Contingency Plan (IR Plan) provided in Attachment 12C. The assessment discusses previous inadvertent returns and provides the data and analysis requested (See Appendix C of IR Plan).</p>

IN 3.o	Provide an analysis of potential impacts that the use of drilling fluid could have on the hydrology and quality of streams and wetlands that will be crossed using HDD. 25 Pa. Code §§ 105.13(e)(1)(viii), (ix) and (x)	IR Plan provided in Attachment 12, Tab 12C has been updated to provide an analysis of the potential impacts that the use of drilling fluid could have on the hydrology and quality of streams and wetlands that will be crossed using HDD.
IN 3.p	The applicant must identify the location of all public water supplies (surface water intakes of public drinking water supplies and public supply wells) within 1 mile of the project as per §105.13.e(1)(ii) and evaluate potential impacts that HDD and other resource crossing activities could have on these water supply resources and include the evaluation in the application. 25 Pa. Code § 105.13(e)(1)(x)	Water supplies, including those within 1 mile of the Project, have been analyzed and addressed within three supplemental plans to the PPC Plan, the Water Supply Assessment, Preparedness Prevention and Contingency Plan, the IR Plan, and the Void Mitigation Plan for Karst Terrain and Underground Mining. These plans are provided in Attachment 12.
IN 4	Regarding your resource impact tables:	NA - Heading
IN 4.a	Revise your impact tables to indicate which resources will also require temporary road crossings, and what type of crossing method (e.g. mats, pads) is proposed. This includes temporary road crossings after the pipelines are installed. A total number of temporary road crossings should also be provided. 25 Pa. Code §105.13(e)(1)(iii)	The aquatic resource impact tables located in Attachment 11 contain footnotes indicating which resources will require temporary crossings, the type of crossing method, and the total number of required temporary road crossings. All temporary road crossings will be maintained until the restoration and clean-up phase of the construction process for that length of the Project has been completed.
IN .b	Revise your impact table to specify the linear footage for both temporary and permanent stream impacts for each impact. Total impact footage should also be provided. 25 Pa. Code §105.13(e)(1)(iii)	The revised aquatic resource impact tables provided in Attachment 11 specify the linear footage for both temporary and permanent stream impacts and also provide the total impacted linear footage for all stream impacts.

IN 4.c	The impacts described under Section 5.0 of your “Impact Avoidance, Minimization, and Mitigation Plan” are inconsistent with the impacts provided in the “Waterbody Impact Summary” tables provided in your application. Resolve this inconsistency so that correct impact totals are reflected throughout your application. 25 Pa. Code 105.13(e)(1)(iii)	The Project impact table is now located in Attachment 11, Enclosure E, Part 2 and has been revised to match impact acreages identified elsewhere in the Application.
IN 4.d	Wetland N34 is located in the floodplain of a watershed (Findley Run) that is included on the PAFBC Wild Trout List. This resource should be considered EV. Revise the appropriate documents to reflect this. 25 Pa. Code § 105.13(e)(1)(iii)	All appropriate documents have been revised to reflect Wetland N34’s classification as anExceptional Value due to its proximity to a stream that is a tributary to a stream with a known naturally-reproducing trout population.
IN 4.e	The Waterbody Impact Table lists “n/a” for the PAFBC Stream Designation for S-N65 and S-N66 (UNT’s to Findley Run). This watershed is included on the PAFBC Wild Trout List. Revise the appropriate documents to reflect the correct stream designation for the watercourse. 25 Pa. Code §§105.13(e)(1)(A) and (iii)	Streams S-N65 and S-N66 have been revised on the appropriate documents to reflect a PAFBC classification of "(Drains to) TNR", because they are streams that are tributaries to a stream with a known population of naturally-reproducing trout.
IN 5	Regarding your agency coordination:	NA - Heading
IN 5.a	Provide PNDI clearances from the PA Game Commission and US Fish and Wildlife Service. 25 Pa. Code §§105.13(e)(1)(x) and 105.23	The PGC provided clearance by letter dated June 8, 2016. The USFWS provided a final determination in letter dated October 31, 2016. Both letters are provided in Attachment 6.
IN 5.b	Provide proof that you have received clearance for your project from PHMC. 25 Pa. Code §§105.13(e)(1)(x) and 105.23	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, neither of the regulations referenced in DEP’s comment require SPLP to provide clearance or approval from the PHMC as part of a Chapter 102 or Chapter 105 Joint Permit Application (JPA). Furthermore, as noted in a letter from Alexandra C. Chiaruttini, Esq., DEP’s Chief Counsel concerning the

		<p>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.</p> <p>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.</p>
IN 6	Regarding your alternatives analysis:	NA - Heading
IN 6.a	The alternatives analysis provided in your application only summarizes major avoidance and minimization actions. 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)	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 6.b	Some portions of the proposed right-of-way and pipelines directly abut the maintenance corridor of the existing Mariner East I pipeline; however, in other portions the proposed right-of-way has partial or near complete overlap with the existing maintenance area and pipeline. Increased overlap of the proposed right-of-way and the existing Mariner East I maintenance corridor could further avoid and minimize impacts. Revise the application accordingly to avoid and minimize impacts by locating the proposed right-of-way with overlap of the existing maintenance corridor, or provide a detailed analysis and discussion with specific details explaining why this overlap is present in some areas and not others, and why the proposed right-of-way cannot further overlap. 25 Pa. Code §105.13(e)(1)(viii)	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
IN 6.c	Impacts and secondary impacts from the temporary right-of-way and associated temporary work spaces can be avoided by locating these features 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 impacts. Document and provide evidence that other routes and designs would not further avoid or minimize impacts. 25 Pa. Code §105.13(e)(1)(viii)	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.

<p>IN 6.d</p>	<p>Several waters of the Commonwealth could be crossed using trenchless installation methods that could reduce surface impacts. Provide a revised alternatives analysis that incorporates a discussion of alternative crossing techniques (e.g., conventional bore or HDD) addressing each resource crossing and explaining why trenchless installation methods are not appropriate. 25 Pa. Code §105.13(e)(1)(viii)</p>	<p>The Alternatives Analysis provided in Attachment 11, Enclosure E, Part 3 has been revised to include a discussion on the limitations of trenchless methods as well as a trenchless feasibility assessment.</p>
<p>IN 6.e</p>	<p>Regarding your “No-Action Alternative”, your application states, “pipelines are considered to be a safer, more efficient mode of transport for many types of substances, including natural gas and NGL’s.” Provide evidence of pipeline safety/efficiency when compared to road/rail transport. 25 Pa. Code §105.13(e)(1)(viii)</p>	<p>The Project Description has been revised to provide evidence that pipelines are considered to be a safer, more efficient mode of transport for many types of substances, including natural gas and NGLs, and is provided in Attachment 9, Appendix A.</p>
<p>IN 6.f</p>	<p>Revise your alternatives analysis to discuss routing alternatives that were considered as alternatives to impacting wetlands that are considered to be Exceptional Value. 25 Pa. Code §§105.13(e)(1)(viii) and 105.18a(3)</p>	<p>The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.</p>
<p>IN 6.g</p>	<p>The impacts described in Table 2 do not match those reported elsewhere in the application. Confirm the correct data and revise your application accordingly. 25 Pa. Code §105.13(e)(1)(viii)</p>	<p>The Application has been checked for consistency with Table 2 and the Application has been revised accordingly.</p>
<p>IN 6.h</p>	<p>As discussed in comment 2.g., the Mariner East 1 pipeline had several inadvertent returns during the construction process. Discuss how you have taken these historic issues into account in your design of the proposed project. 25 Pa. Code §105.13(e)(1)(viii)</p>	<p>All As-built Conditions for the ME1 Projects, including the 12-inch Houston to Delmont installation and the 8-inch repair project, were used to carefully plan the horizontal and vertical installation of the PPP pipeline HDDs. In addition, all foreign and other SPLP lines were identified and the plans for such lines were obtained to identify the horizontal and vertical locations of these</p>

		<p>existing lines. Previous IRs were also known to engineers and that information, along with the geotechnical borings, geology of the area, and existing line plans, were all used in planning for the PPP pipeline HDDs. In the case of the Marsh Creek drill for the 8-inch repair project in Chester County, the IRs resulted in rerouting of the pipeline. IR risk assessments have been added to the revised IR Plan provided in Attachment 12C to further add to the integrity of the installation plans without compromising other lines or posing additional risks to ground and surface waters.</p>
IN 6.i	<p>A significant portion of the proposed activities in Indiana County do not appear to be co-located with the existing “maintenance corridor.” Revise your alternatives analysis to evaluate the feasibility of utilizing the existing corridor. 25 Pa. Code §105.13(e)(1)(viii)</p>	<p>The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.</p>
IN 6.i.i	<p>The area that deviates from the existing “maintenance corridor” proposes to impact EV wetlands. Revise your alternatives analysis to specifically discuss the routing alternatives that were considered that would avoid impacting EV wetlands in this area. 25 Pa. Code §105.13(e)(1)(viii)</p>	<p>The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.</p>
IN 6.j	<p>The HDD crossing leading up to the crossing of Wetland P1 (shown on plan 3/38) appears to end right at the resource. Evaluate extending the HDD crossing method through the resource to reduce surface impacts and disturbance to the resource. 25 Pa. Code §105.13(e)(1)(viii)</p>	<p>A block valve is proposed in an upland area to the east of Wetland P1 and the pipeline needs to surface before the block valve setting. Thus, the HDD cannot be extended as requested.</p>

IN 6.k.8	It appears that the proposed timber mat crossings of the following resources could be avoided by using the opposite side of the right-of-way for access 25 Pa. Code §105.13(e)(1)(viii):	NA - Heading
IN 6.k.i	Wetland N69	The entire area is proposed to be disturbed as it is included in the LOD/permanent ROW. If this wetland is to be crossed by equipment it will be timber matted. The E&S Plans depict this BMP.
IN 6.k.ii	Wetland N65	The entire area is proposed to be disturbed as it is included in the LOD/permanent ROW. If this wetland is to be crossed by equipment it will be timber matted. The E&S Plans depict this BMP.
IN 6.k.iii	Wetland N55 and Stream N84	The entire area is proposed to be disturbed as it is included in the LOD/permanent ROW. If this wetland is to be crossed by equipment it will be timber matted. The E&S Plans depict this BMP.
IN 6.k.iv	Wetland N45	The entire area is proposed to be disturbed as it is included in the LOD/permanent ROW. If this wetland is to be crossed by equipment it will be timber matted. The E&S Plans depict this BMP.
IN 6.l	The proposed pipeline route appears to physically turn into and impacts Wetland O68. Evaluate avoiding these wetlands. 25 Pa. Code §105.13(e)(1)(viii)	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
IN 6.m	Evaluate why the pipeline cannot remain straight to avoid impacting Wetland O55. 25 Pa. Code §105.13(e)(1)(viii)	The Alternatives Analysis in Attachment 11, Enclosure E, Part 3 has been revised to address this comment.
IN 7	Identify the proposed provisions for a shut-off in the event of a break or rupture of the pipeline. 25 Pa. Code §105.301(9)	The revised Project Description provided in Attachment 9 discusses block valves 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.

IN 8	Trench plugs are proposed to maintain wetland hydrology during construction. Revise your wetland crossing detail to include trench plugs within the wetland for long open-cut wetland crossings and specify the distance increments. Furthermore, the E&S plan drawings depict trench plugs which are inconsistent with the wetland crossing detail. Revise the site plans to be consistent with the detail. 25 Pa. Code §105.13(e)(1)(i)	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.
IN 9	Regarding your General Information Form (GIF) and Joint Permit Application:	NA - Heading
IN 9.a	The Application and GIF have different titles for M.L. Gordon. Provide accurate and consistent titles for Mr. Gordon. 25 Pa. Code §105.13(i)	The Application has been revised to provide a consistent title for M.L. Gordon.
IN 9.b	List the types and amounts of emissions to satisfy question 13.0.1 of the GIF. [1300-PM-BIT0001 5/2012 Instructions]	Question 13.0.1 of the General Information Form in Attachment 1 has been revised to address this comment.
IN 10	Provide a description of the expected duration each temporary stream and wetland crossing will remain in place. 25 Pa. Code §105.13(e)(1)(iii)	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.
IN 11	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 crossings of “intermediate” (10-30’ across) waterbodies. To facilitate a 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. The duration of construction in wetlands will vary depending on the length of the wetland, whether it will be tied in with an associated stream crossing (in which case the crossing duration will be the same as that stream

		crossing), or whether it will be constructed as part of the mainline construction process (in which case spoil will typically not be sidecast in wetlands for more than 30 days, in accordance with standard USACE requirements), and other factors.
IN 12	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:	NA - Heading
IN 12.a	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)	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, with the 20-inch pipeline preceding the 16-inch pipeline. 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.

IN 12.b	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.
IN 12.c	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. 25 Pa. Code §105.13(e)(1)(iii)	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.
IN 12.d	If the pipelines are proposed to be installed at separate times, revise your alternatives analysis to evaluate the feasibility of installing the two pipelines concurrently with one another to avoid and minimize impacts. 25 Pa. Code §105.13(e)(1)(viii)	The two pipelines will be installed during the same time period, as described above. Accordingly, the Alternatives Analysis has not been revised to evaluate this issue.
IN 12.e	You may need to revise your fee calculation spreadsheets to account for the additional, second temporary disturbance resulting from a second, separate installation. 25 Pa. Code §105.13	Both pipelines will be installed within the same limit of disturbance as set forth in the permit application, so there will be no “additional, second temporary disturbance resulting from a second separate installation.” Therefore, no revision of the fee calculation spreadsheet is necessary.
IN 12.f	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. 25 Pa. Code §105.13(g)	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.

IN 13	Regarding your proposed water withdrawal and discharge:	NA - Heading
IN 13.a	Provide plans and cross sections indicating pipe size, type, placement, and locations for all aquatic resources where the proposed water withdrawals and discharges are proposed. Please note that placement of fill material, encroachment, or other obstructions may require this activity to be permitted. 25 Pa. Code §§105.13(e)(1)(i), (ii) and (iii)	<p>There are no water withdrawals in Indiana County. 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.</p> <p>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. Pursuant to 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.</p>
IN 13.b	Provide a summary table of all withdrawal and discharge locations. This table should describe the acreage and linear footage of impact to aquatic resources. 25 Pa. Code §105.13(e)(1)(iii)	Outfall locations are noted on the Chapter 102 E&S drawings and Details (tables referenced at each outfall). All encroachments and obstructions for discharges are limited to the LOD and calculated within the aquatic resource impact tables provided in Attachment 11. All discharge equipment is temporary. There are no withdrawal locations in Indiana County.
IN 14	Regarding your Environmental Assessment:	NA - Heading

IN 14.a	Revise the application to clarify whether the exceptional value wetland analysis included all factors listed in 25 Pa. Code §105.17(1). If necessary, update the application to analyze all factors. 25 Pa. Code §105.13(e)(1)(x)(B)	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.
IN 14.b	EV wetlands are defined as EV waters by Chapter 93. Therefore, explain the measures the applicant will implement to comply with the antidegradation requirements of the Department's water quality standards program. 25 Pa Code §93.4c(b); §93.4c(b)(2); §93.1 (defn. of surface water of exceptional ecological significance); §105.14(b)(11); §105.18a(a)(4); 24 Pa.B. 922 (February 12, 1994)(Incorporation of the Department's Existing Wetlands Protection Program into Water Quality Standards Program)	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.
IN 14.c	You must identify the location of all public water supplies (surface water intakes of downstream public drinking water supplies and public supply wells) within 1 mile of the project as per 25 Pa. Code §105.13(e)(1)(ii).	The location of all public water supplies within 1 mile of the Project is identified within three supplemental plans to the PPC Plan, the Water Supply Assessment, Preparedness Prevention and Contingency Plan, the IR Plan, and the Void Mitigation Plan for Karst Terrain and Underground Mining. These plans are provided in Attachment 12.

IN 14.c.i	Upon identification of public drinking water supplies, revise your responses to questions 14.0, 15.0, and 16.0 of the General Information Form accordingly. 25 Pa. Code §105.13(a)	The responses to questions 14, 15, and 16 of the General Information Form in Attachment 1 have been revised to address this comment.
IN 14.c.ii	Upon identification of public drinking water supplies, revise the Environmental Assessment Form and associated enclosures to discuss the potentially affected resources and impacts from water obstructions and encroachments on the public water supplies. 25 Pa. Code §105.15(a)	Attachment 12, Tab 12B provides 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.
IN 14.c.iii	Upon identification of public drinking water supplies, revise the Alternatives Analysis and Mitigation Plan 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) and 105.14(b)(5)	The Alternatives Analysis in Attachment 11, Enclosure E; and the Impact Avoidance, Minimization, and Mitigation Procedures in Attachment 11, Enclosure E, Part 4 have been revised to address this comment.

IN 14.d	<p>Section F, Attachment 11, EA Form, Page 2, item 7 states, “Is the water resource part of or located along a private or public water supply?” The Applicant checked “No”. However, no documentation validating this statement is provided in the application. The Department is concerned that private and perhaps public water supply wells are located along crossed stream and wetland water resources and/or along the length of the HDD operations. The applicant needs to propose measures to protect all water uses, both surface intakes and groundwater sources, located along and/or downstream of the proposed work areas. Special attention needs to be applied to the potential unplanned impacts that HDD and inadvertent releases (IR) may have on groundwater sources. In addition, where a structure or activity is in a wetland, the applicant must demonstrate that this project will not cause or contribute to the pollution of groundwater or surface water resources or diminution of resources sufficient to interfere with their uses, including use as a public or private water supply. Your assessment needs to include identification, notification and consultations with water suppliers and/or well owners. A notification contact list needs to be included in your PPC Plan and Inadvertent Release Plan. 25 Pa Code §105.13; §105.14(b)(4); §105.14(b)(5); §105.18a(5); §105.18a(b)(5)</p>	<p>Water supply impacts have been analyzed and addressed within three supplemental plans to the PPC Plan, the Water Supply Assessment, Preparedness Prevention and Contingency 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.</p>
---------	---	---

IN 14.e	Enclosure C of the Environmental Assessment discusses the various sections in terms relative to the existing pipeline right-of-way, however, the proposed right-of-way does not fully overlap the existing right-of-way. Revise Enclosure C to discuss the impacts upon resources outside of the existing right-of-way. 25 Pa. Code §105.13(e)(1)(x)	Attachment 11, Enclosure C has been revised to clarify that there are Project areas that do not completely overlap the existing ROW. 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 existing ROW.
IN 14.f	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)	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 and/or the EI by visual observation.
IN 14.g	Update and revise Section A.3 of Enclosure D of the Environmental Assessment to discuss any necessary avoidance and minimization measures relative to coordination with the Pennsylvania Historical and Museum Commission. 25 Pa. Code §§105.13(e)(1)(x), 105.15(a) and 105.23	As noted previously, SPLP is not required to provide clearance or approval from the PHMC as part of a Chapter 102 or Chapter 105 JPA. SPLP has consulted with the PHMC, however concerning the Pennsylvania Pipeline Project and Enclosure D in Attachment 11 has been updated to include avoidance and minimization measures consistent with PHMC consultations to date.
IN 14.h	Revise Section B.1.c. of Enclosure D of the Environmental Assessment to discuss any avoidance and minimization measures that resulted from agency coordination and the means by which you will implement those measures. 25 Pa. Code §105.15(a)	Enclosure D 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.

IN 14.i	The previous Technical Deficiency Letter requested that you revise Enclosures C and D of your Environmental Assessment to specifically describe wetlands that are designated as “Exceptional Value”, and describe the impacts your project will have on these resources. The response that you provided lacked sufficient detail. Regarding this item:	NA - Heading
IN 14.i.i	Provide a functions and values assessment for each individual wetland that is described as Exceptional Value (EV). This assessment should individually describe the functions and values of each of these EV wetlands. Each of the specific functions and values (i.e. Aquatic Habitat, Water Quantity and Streamflow, Water Quality, Recreation, and all of the other functions and values listed under Enclosure C of the Departments Environmental Assessment form) should be discussed. 25 Pa. Code §105.13(e)(3)	A full Functions and Values Assessment package is provided for the Exceptional Value wetlands, which includes a Wetland Function-Value Evaluation Form and vegetation data sheet. This Assessment package individually describes the functions and values of each of the Exceptional Values wetlands, consistent with DEP regulations. For all other wetlands, functions and values were evaluated and are listed in a matrix format. The Assessment package is provided in Attachment 11, Enclosure C.
IN 14.i.ii	Describe the methodology that was used to assess the functions and values of these wetlands. 25 Pa. Code §105.13(e)(3)	Functions and values of wetlands were assessed using the methodology and guidelines contained within the US Army Corp of Engineers The Highway Methodology Workbook Supplement: Wetland Functions and Values A Descriptive Approach NAEEP-360-1-30a (SEPTEMBER 1999).

IN 14.i.iii	In addition, evaluate and discuss whether your project will affect the functions and values of these wetlands. 25 Pa. Code §105.18a(a)	Wetland restoration will be performed at each wetland according to the Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4. Each method of crossing is provided and designed to ensure wetland functions and values 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. In limited cases where functions and values are changed, such as when PFO habitats are permanently converted to PEM habitats, a compensatory mitigation plan is provided in Attachment 11, Enclosure F.
IN 14.i.iv	Please note that if your project will adversely affect these wetlands, you are required to consider, among other things, ways to avoid or minimize these impacts, and will be required to compensate for unavoidable impacts to these wetlands. 25 Pa. Code §§105.18a(1), (3) and (7)	Wetland 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. 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. In limited cases where functions and values are not restored, such when PFO habitats are permanently converted to PEM habitat areas, a compensatory mitigation plan is provided in Attachment 11, Enclosure F.

IN 14.j	Wetland O72 was listed as Exception Value (EV) wetlands in your initial application. This wetland is no longer identified as EV in your revised application. Explain why this change occurred. 25 Pa. Code §105.13(e)(1)(x)	Wetland O72 was not listed as EV in the impact tables or JPA site plans from either the July 2015 original submission; the September 2015 response to incompleteness comments; or the March 2016 submission of the application in March 2016 (as amended in May 2016). It has been re-evaluated for this submission for EV status and it does not meet EV status criteria.
IN 14.k	The Environmental Assessment focuses primarily on areas where the proposed pipeline will be co-located within the existing right-of-way. Much of the pipeline in Indiana County is proposed to be installed in a new right-of-way that will be established for the project. Revise your Environmental Assessment to discuss the impacts that the creation of any and all new right-of-way areas along the entire length of the project will have on aquatic resources and other environmental factors as discussed in 25 Pa. Code §105.13(e)(1)(x)	Approximately 3.92 miles of new ROW, not co-located with the 8-inch pipeline, would be created in Indiana County, but overall, more than 80% of the Project length is aligned parallel and adjacent to existing utility corridors operated by either SPLP or others. The revised Alternatives Analysis provided in Attachment 11, Enclosure E, Part 3, discusses this alternative and the reasoning for departure from the 8-inch pipeline. In general, Project routing decisions sought to co-locate the pipelines with existing corridors to the extent available; where existing corridors were not available, the Project proposes to create new corridor leading to rejoin the nearest existing corridor in the shortest length practicable, while also minimizing impacts to waters, landowners, and other environmental resources. Also, in accordance with the referenced 25 Pa. Code §105.13(e)(1)(x), the application's impacts analysis addresses the potential impacts, to the extent applicable, of the proposed Project on water quality, stream flow, fish and wildlife, aquatic habitat, Federal and State forests, parks, recreation, instream and downstream water uses, prime farmlands, areas or structures of historic significance, streams which are identified candidates for or are included within the Federal or State wild and scenic river systems and other relevant significant environmental factors. Please see the revised Attachment 11, Enclosures C and D for the county

		specific description of these resources and factors and the impacts. In addition, see the new Attachment 11, Enclosure E, Part 2 for a comprehensive environmental evaluation of the Project-wide impacts.
IN 14.1	Revise Section A.9 of Enclosure D of your Environmental Assessment to discuss and identify impacts to preserved farms and to farms with agriculture preservation easements or restrictions. Discuss how the minimization measures would affect preserved farms and how the farms will be affected by the project. 25 Pa. Code §105.13(e)(1)(x)	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.
IN 14.m	Provide an evaluation of the impact that open cut installation methods could have on wetlands that rely on perched water tables, confining layer, and/or fragipans to maintain hydrology. This evaluation should include a discussion of how your proposed activities, and, if applicable proposed mitigation will maintain wetland hydrology in these types of areas. 25 Pa. Code §105.13(e)(1)(x)	SPLP has evaluated the potential for all wetlands to contain fragipan soils or other confining layers through an investigation of the USDA soil series as well as field data collected during wetland delineations and functions and value assessments. A licensed professional geologist (PG) will be present to evaluate each wetland that is found to have a potential confining layer during trenching. During trenching of these wetlands, the PG will advise on the segregation of confining layers for proper restoration of subsurface conditions. At wetlands determined to require confining layer restoration, the PG will be on-site during subsurface soil backfilling to ensure proper soil layer restoration. PGs may advise on bentonite or 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 properly. This combined with implementation of standard utility wetland crossing methods described more fully in the Impact Avoidance, Minimization and Mitigation Procedures in Attachment 11, Enclosure E, Part 4, will ensure that hydrology is maintained post-construction.

IN 14.n	Revise Enclosure D of the Environmental Assessment to evaluate how pipe installation combined with permanent right- of-way maintenance will not result in an adverse impact to wetlands. The evaluation should specifically include a discussion of potential impacts to hydrology that could occur from open cut installation. 25 Pa. Code §105.13(e)(1)(x)	The Impact Avoidance, Minimization and Mitigation Procedures document has been revised to provide measures that address potential impacts associated with open cut pipeline installation and the use of HDD drilling fluids to wetland hydrology, and is located in Attachment 11, Enclosure F. The Environmental Assessment has also been revised to evaluate potential impacts of pipeline construction and maintenance to wetlands, including potential impacts associated with open cut pipeline installation and the use of HDD drilling fluids to wetland hydrology, and is located in Attachment 11, Enclosure D and Attachment 11, Enclosure E, Part 2.
IN 14.o	Revise Enclosure D of the Environmental Assessment to evaluate how pipe installation combined with permanent right-of-way maintenance will not result in an adverse impact to wetlands. The evaluation should specifically include a discussion of potential impacts to hydrology that could occur from open cut installation. This evaluation should also address any potential impacts the use of HDD drilling fluids would have on wetland hydrology. 25 Pa. Code §§105.13(e)(1)(x) and §105.18a	Enclosure D and Attachment 11, Enclosure E, Part 2 have been revised to address how pipe installation and permanent ROW maintenance will not result in adverse impacts to wetlands, including addressing impacts to hydrology from trenched construction techniques, and potential impacts from HDD drilling fluids. Information describing the proposed wetland crossing techniques that are designed to avoid impacts to wetland hydrology is found in Attachment 11, Enclosure E, Part 4 (Impact Avoidance, Minimization, and Mitigation Procedures). Attachment 12, Tab 12C (IR Plan) addresses the steps taken to prevent the release of HDD drilling fluids.
IN 14.p	Revise Enclosures C and D to assess and discuss the condition of, and impacts to, forested and scrub shrub riparian areas. Revise the enclosures to discuss the primary and secondary impacts, as well as consideration of antidegradation 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) and 105.14(b)(14)	Attachment 11, Enclosure E, Part 2 discusses primary and secondary impacts to forested and scrub-shrub riparian areas; and Attachment 11, Enclosure E, Part 5 has been expanded to include an analysis of Chapter 105 antidegradation requirements related to forested riparian buffer impacts along watercourses crossed by the Project.

IN 14.p.i	The Department recommends evaluating the riparian areas from the top of bank landward 100 feet. Provide justification if the area evaluated is less than 100 feet. 25 Pa. Code §§105.14 and 105.15	Attachment 11, Enclosure E, Part 2 discusses primary and secondary impacts to forested and scrub-shrub riparian areas, including an evaluation of the area 100 feet landward of the top of bank.
IN 14.p.ii	To avoid and minimize the impacts to the watercourses, provide a plan to replace the vegetation lost in both permanent and temporary right-of-way and workspaces. Alternatively, where the vegetation cannot be replaced or protected from clearing during the proposed project's operation and maintenance activities, provide an explanation. 25 Pa. Code §§105.13(e)(1)(viii), 105.14 and 105.15	Except at above ground facilities including valve and pump stations, all previously vegetated temporary and permanent workspaces will be 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.
IN 14.p.iii	Revise the application plan drawings and project description to state whether vegetation clearing, cutting, removal, or other alteration is proposed as part of the proposed projects' construction, operation, and maintenance. Revise the plan drawings to clearly indicate all locations where maintenance clearing, cutting, removal, or other alteration is not part of proposed maintenance activities. 25 Pa. Code §§105.13(e)(1)(iii), 105.14 and 105.15	<p>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.</p> <p>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</p>

		<p>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.</p> <p>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.</p> <p>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</p>
--	--	--

		<p>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.</p>
<p>IN 14.q</p>	<p>Your application identifies “travel lanes” at numerous resource crossings, however, details on these travel lanes have not been provided. Please provide details on these travel lanes that includes but are not limited to: cross sectional views, length of time in service, potential impacts, and any other relevant details. Please note that the application did not detail any impacts, permanent or temporary, for these travel lanes even though they are shown to cross resources. As such your impact tables may need to be revised. 25 Pa. Code § 105.13(e)(1)(x)</p>	<p>Travel lanes (or Travel LOD or Travel and Clearing LOD) are identified at some HDD and bore crossings to facilitate travel of equipment through the resource; however, the pipelines will be installed via the trenchless method. Where we travel over a stream an equipment bridge will be installed in accordance with the referenced E&S Plan sheet provided on the aerials site plans in Attachment 7, Tab 7A and the aquatic resource impact tables located in Attachment 11, Enclosure E, Part 4. Standard typical details are provided for these crossings with the E&S Plan located in Attachment 12. The Impact Avoidance, Minimization, and Mitigation procedures discuss the different resource crossing types and methods.</p>
<p>IN 15</p>	<p>For all wetlands within the project area, identify and describe the methodology you used to assess the functions and values of those wetlands. 25 Pa. Code §105.13(e)(3)</p>	<p>Functions and values of wetlands were assessed using the methodology and guidelines contained within the US Army Corp of Engineers’ The Highway Methodology Workbook Supplement: Wetland Functions and Values, A Descriptive Approach NAEEP-360-1-30a (SEPTEMBER 1999). The assessment included a review of site specific data collected during field visits, desktop analysis, and information collected as part of the PA PNDI process. This list of functions and values was also compared to Enclosure C of the DEP EA form to ensure those functions were also considered during the identification of functions and values using the Highway Methodology. For Exceptional Value wetlands, a full Functions and Values Assessment package is provided, which includes a Wetland Function-Value Evaluation Form and vegetation data sheet. For all other wetlands, functions and values</p>

<p>IN 16</p>	<p>It is unclear on the plan drawings and in the application narrative precisely whether vegetation cutting, clearing, removal, or grubbing is part of the proposed construction, operation, and maintenance. Where HDD and bore crossings of resources are proposed, a permanent easement is identified and impacts are identified as permanent only for the pipe size. At other resource crossings a permanent right-of-way is identified and impacts are identified as permanent for the entire right-of-way. No explanation has been provided in the application for this different nomenclature. 25 Pa. Code §105.13(e)(1)(x)</p>	<p>were evaluated and are listed in a matrix format.</p> <p>The Project Description located in Attachment 9 has been revised to define the nomenclature of the terms discussed below, and the aerial site plans located in Attachment 7, Tab 7A have been revised 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.</p> <p>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.</p> <p>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</p>
--------------	--	--

		<p>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.</p> <p>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.</p>
IN 16.a	Revise the application plan drawings and narratives, including the project description and mitigation plan, to clearly and specifically state whether vegetation clearing, cutting, removal, or other alteration is proposed as part of the proposed construction, operation, and maintenance of the project. 25 Pa. Code §105.13(e)(1)(iii)	See response for IN 14.p.iii.
IN 16.b	Revise the plan drawings to indicate all locations where maintenance clearing, cutting, removal, or other alteration is not part of proposed maintenance activities. 25 Pa. Code §105.13(e)(1)(i)	See reponse for IN 14.p.iii.

IN 16.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 and streams, the application must be revised to identify and discuss in detail the direct and secondary impacts to aquatic resources from the proposed project. The Environmental Assessment should be revised to discuss these resources and the impacts thereto. Compensatory mitigation may be necessary and required to compensate for impacts to these resources. 25 Pa. Code §§105.13(e)(1)(ix) and 105.13(e)(1)(x)	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).
IN 17	The Mitigation Plan states that “No Mow” signs will be placed at PSS and PFO wetlands which will be crossed by open cut methods. Regarding these crossings:	NA - Heading
IN 17.a	Revise the application plan drawings and application narratives, including the project description and mitigation plan, to state whether vegetation clearing, cutting, removal, or other alteration is proposed as part of the proposed project’s normal construction, operation, and maintenance of the project. 25 Pa. Code §§105.13(e)(1)(i) and 105.13(e)(1)(iii)	See response for IN 14.p.iii.

IN 17.b	Revise the plan drawings to clearly indicate all locations where maintenance clearing, cutting, removal, or other alteration is not part of proposed maintenance activities. 25 Pa. Code §105.13(e)(1)(i)	See response for IN 14.p.iii.
IN 17.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 and streams, the application must be revised to identify and discuss in detail the direct and secondary impacts to aquatic resources from the proposed project. The Environmental Assessment should be revised to discuss these resources and the impacts thereto. Compensatory mitigation may be necessary and required to compensate for impacts to these resources. 25 Pa. Code §§105.13(e)(1)(ix) and 105.13(e)(1)(x)	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).
IN 18	Regarding the proposed conversion of wetland cover types:	NA - Heading
IN 18.a	You have indicated that 0.025 acres of PFO wetlands will be converted to PEM wetlands as a result of your proposed activities in Indiana County. The cumulative impact for the entire project (state-wide) is represented to be 0.92 acres:	NA - Heading

<p>IN 18.a.i</p>	<p>Revise the Environmental Assessment to discuss the impacts to each wetland where a vegetative class change is proposed (e.g., PFO to PSS). The discussion should be specific to the wetland and its functions and values. 25 Pa. Code §105.15(a)</p>	<p>Wetland O46 is the only wetland proposed for conversion from 0.025 acre of PFO to 0.25 acre of PEM in Indiana County. The application has been revised to include full restoration of this habitat back to PFO and the details are provided within the Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4.</p>
<p>IN 18.a.ii</p>	<p>Provide a discussion that evaluates utilizing methods such as HDD and boring to further minimize conversion impacts to PFO wetlands. 25 Pa. Code §105.13(e)(1)(viii)</p>	<p>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. SPLP specifically evaluate Wetland O46 (which is the only PFO conversion wetland in Indiana County) and determined that a trenchless method is not technically feasible.</p>
<p>IN 18.a.iii</p>	<p>Revise the Mitigation Plan to replant the PFO wetlands in the permanent and temporary right-of-way with native trees if possible. If not, provide specific details and documentation why this is not possible. 25 Pa. Code §105.13(e)(1)(ix)</p>	<p>In conventional lay areas, the pipelines will be trenched to achieve 4 feet of cover. Trees are excluded from the 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.</p>
<p>IN 18.a.iv</p>	<p>If this conversion cannot be avoided, provide a mitigation plan that compensates for this impact. 25 Pa. Code §105.13(e)(1)(ix)</p>	<p>In Indiana County, all PFO impacts will be restored to PFO habitats in accordance with the Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4.</p>

<p>IN 18.b</p>	<p>The Mitigation Plan and Environmental Assessment do not evaluate the cumulative conversion of wetland cover types for the entire project. Revise the application to assess the cumulative impact the proposed cover type conversion will have in Indiana County, and also across the entire length of the project. Compensatory mitigation should be provided for these cover type conversions. 25 Pa. Code §§105.13(e)(1)(ix) and (x) and 105.18a</p>	<p>The Application was updated to include an Alternatives Analysis, which includes an evaluation of the cumulative (total) conversion of wetland cover types by county and for the entire Project, and is located in Attachment 11, Enclosure E, Part 3. A compensatory mitigation plan is provided for these cover type conversions and is located in Attachment 11, Enclosure F.</p>
<p>IN 18.c</p>	<p>You have proposed to convert PFO wetlands to PEM cover type. To provide a function that more closely matches the functions and values of the existing PFO wetlands, evaluate the possibility of replanting these PFO conversion areas with shrubs to establish PSS wetlands, rather than the PEM cover type that is proposed. 25 Pa. Code §105.13(e)(1)(ix)</p>	<p>As explained in 18.a.1 and 18.a.11 above, Wetland O46 was the only wetland proposed for conversion from 0.025 acre of PFO to 0.25 acre of PEM in Indiana County. The application has been revised to include restoration plantings in this area 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.</p>
<p>IN 18.d</p>	<p>Your application should discuss potential impacts to PSS wetlands resulting from rights-of-way maintenance activities (such as mowing) that may cause a conversion of these wetlands to PEM. If this information is in the application please indicate where it is located. 25 Pa. Code §§105.13(e)(1)(viii) and (x)</p>	<p>Currently SPLP plans to either replant all PSS wetlands, or, in areas where the root system remains in place, will allow to revert to PSS cover type, for a total of 0 (zero) acres of permanent conversion of PSS cover type. ROW maintenance activities should not cause a conversion of PSS wetlands, either planted or reverting, because SPLP will have specifications and protections in place that ensure mowing is avoided in these areas. Those specifications are outlined within the Impact Avoidance, Minimization, and Mitigation Procedures located in Attachment 11, Enclosure E, Part 4.</p>
<p>IN 19</p>	<p>Regarding your proposed mitigation activities:</p>	<p>NA - Heading</p>

IN 19.a	Revise your Mitigation Plan to identify the wetland seed mix that will be used to reseed wetlands that are disturbed as a result of your activities. Your plan should also include invasive species control and monitoring and reporting. 25 Pa. Code §105.13(e)(1)(ix)	The Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure F includes the details for standard and site-specific wetland restoration, including the wetland seed mix, as well as invasive species control, monitoring, and reporting.
IN 19.b	Provide planting plans and details for the replanting of PFO areas in the permanent and temporary right-of-ways. 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, the timing of the plantings, criteria for success, and a monitoring plan to ensure reestablishment of the wetland. 25 Pa. Code §105.13 (e)(1)(ix)	All impacts to PFO wetlands within the Temporary workspaces have almost have been eliminated. A single area in Huntingdon County remains and is 0.046 acre. That area will be planted to early successional tree plantings in accordance with the details of the planting plan provided in the Impact Avoidance, Minimization, and Mitigation Procedures located in Attachment 11, Enclosure E, Part 4. A monitoring section is included within that document. The PFO areas occurring within the permanent ROW will be converted to the PEM wetland classification and this conversion is discussed within the Compensatory Mitigation Plan provided in Attachment 11, Enclosure G.
IN 19.c	Revise Section 2.2.2.1 of the Mitigation Plan, Construction in Wetlands with Unsaturated Soils, to include the use of mats and pads for wetland crossings. 25 Pa. Code §105.13 (e)(1)(ix)	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.
IN 19.d	Revise the HDD list at the end of the Inadvertent Return Contingency Plan in the Mitigation Plan, or the project plans, to consistently show where “Drive Through -- Travel Only” areas are proposed. 25 Pa. Code §105.13(e)(1)(iii)	The table in the Inadvertent Return Assessment, Preparedness, Prevention and Contingency Plan has been updated to contain this information. The revised plan is provided in Attachment 12.
IN 19.e	Regarding the proposed stream bank restoration:	NA - Heading

IN 19.e.i	Provide a detailed stream restoration plan and identify all crossings where the stream restoration plan will be applied. This plan should specifically discuss how the streams will be restored following pipeline installation. 25 Pa. Code §105.13(e)(1)(ix)	Streams will be restored in accordance with the E&S Plan provided in Attachment 12. The E&S Plan provides revisions to the narratives, 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 Enclosure E, Part 4 and are consistent with the E&S Plan.
IN 19.e.ii	Revise the stream restoration detail drawing to clearly show that the existing bank slope, grade, and elevation are to be restored. 25 Pa. Code §105.13(e)(1)(ix)	The standard typical stream restoration detail within the E&S Plan has been updated to show that the existing bank slope, grade, and elevation will be restored. The E&S Plan is provided in Attachment 12.
IN 19.e.iii	Identify the biodegradable erosion control matting that is to be used. 25 Pa. Code §105.13(e)(1)(ix)	The biodegradable erosion control matting that will be used is identified in the E&S Plan provided in Attachment 12, and also within the Impact Avoidance, Minimization, and Mitigation Procedures found in Attachment 11, Enclosure E, Part 4.
IN 19.e.iv	Specify which plantings and seed mix is proposed to be used in these areas. 25 Pa. Code §105.13(e)(1)(ix)	The plantings and seed mixes proposed for use in the stream bank restoration are specified in the E&S Plan provided in Attachment 12. Also, the BMPs for stream restoration plantings are discussed within the Impact Avoidance, Minimization, and Mitigation Procedures found in Attachment 11, Enclosure F and are consistent with the E&S Plan.

IN 19.e.v	Address how native streambed material will be restored following open cut crossings. 25 Pa. Code §105.13(e)(1)(ix)	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 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.
IN 19.e.vi	If existing conditions are not to be restored, provide a site specific drawing showing the proposed post-restoration condition. 25 Pa. Code §105.13(e)(1)(ix)	Streams will be restored to existing conditions in accordance with the E&S Plan provided in Attachment 12.
IN 19.e.vii	Discuss and provide details on restoration monitoring that will occur to ensure that invasive species do not occur and restoration is successful, and the documentation that will be developed and maintained for the restoration monitoring. 25 Pa. Code §105.13(e)(1)(ix)	The Impact, Avoidance, Minimization, and Mitigation Procedures in Attachment 11, Enclosure E, Part 4 detail the procedures that address invasive species prevention, restoration monitoring, and associated recordkeeping.

IN 20	The Pennsylvania Fish and Boat Commission has established seasonal restrictions for in-stream construction work. To ensure you adhere to these restrictions, the Department recommends identifying the time-of-year restrictions on the plans. The Department also recommends that these restrictions be placed on the drawings submitted as part of the E&S Permit (ESG 05 000 15 001) 25 Pa. Code §§105.14(c)(3) and 105.23	To ensure contractors are provided with up-to-date information regarding stream designations and restrictions, SPLP has developed a state-of-the-art web-based mapping application that is required to be used by contractors to determine all special environmental restrictions such as PNDI and trout stream restrictions. All of the restrictions and avoidance measures approved by PNDI agencies are included in the Project Description as a summary table. These restrictions and avoidance measures are also in the PNDI agencies' final determination letters and accepted Conservation Plans that are also part of the Project Description (See Attachment 9). In addition, SPLP will implement a comprehensive Environmental Training and Inspection program designed specifically to ensure that contractors are appropriately notified of the restrictions and are adhering to such restrictions.
IN 21	You have provided plans showing the Mariner East 1 "maintenance corridor". Regarding this corridor:	NA - Heading
IN 21.a	It is unclear if this "maintenance corridor" is the same as the permanent right-of-way for Mariner East 1. Please clarify. 25 Pa. Code §105.13(e)(1)(i)	The maintenance corridor is the same as the permanent right-of-way for Mariner East 1.
IN 21.b	Provide a full size, overall map of the Indiana County portion of your project that clearly displays the right-of-way associated with Mariner East 1, and the right-of-way associated with your proposed project. 25 Pa. Code §105.13(e)(1)(ii)	A full size, overall map of the Indiana County portion of the Project, which clearly displays the right-of-way associated with the Mariner East 1 pipeline ROW and the ROW associated with the proposed Project, is provided as Attachment 7, Tab 7A.

IN 22	The impacts described under Section 2.3 of your Mitigation Plan and Table 2 of your Alternatives Analysis are inconsistent with the impacts reported in the other applications associated with your project. Please review your application for accuracy and consistency and revise accordingly. 25 Pa. Code §105.13(e)(1)(iii)	The Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4, replaces the Mitigation Plan provided previously and has been reviewed to ensure consistency with other sections of the applications.
IN 23	We have compared the Plans submitted with this application (JPA) and the Plans submitted with the E&S Permit application (ESG 05 000 15 001). Regarding the site plans and Erosion and Sediment Control Plans you have provided:	NA - Heading
IN 23.a	Describe the difference between the “Permanent Easement” and “Permanent Right-of-Way” areas that are identified on your plans. This description should discuss maintenance activities that will be performed on these areas following construction of the pipeline, and measures that will be taken to ensure that future maintenance activities do not detrimentally impact aquatic resources (e.g. cutting PSS wetlands after restoration). 25 Pa. Code §105.13(e)(1)(iii)	<p>“Permanent Easement” refers to the legal document that gives rise to a right of way. The “Permanent Easement” is legally protected from encroachment by the landowner. The “Permanent Easement” designation on the plans has no relevance to the maintenance activities that will occur.</p> <p>“Permanent Right-of-Way” is the term used in the plans to designate the area where future maintenance activities will occur. The maintenance activity in the Permanent Right-of-Way will vary depending on the type of Right-of-Way (e.g., Permanent Right-of-Way, ROW-Travel LOD, ROW-Travel, Station-LOD, or Block Valve Setting-LOD). These designations are described in the Project Description in Attachment 9. The Minimization, Avoidance, and Mitigation Procedures, provided in Attachment 11, Enclosure E, Part 4 discusses maintenance activities that will be performed in the Permanent Right-of-Way areas following construction of the pipeline as well as measures that will be taken to ensure that future maintenance activities do not detrimentally impact aquatic resources. For example, the plan indicates that “No Mowing” signs will be placed in PSS areas that will be</p>

		restored within the Permanent Right-of Way. These areas will also be inspected for continued presence of signage as part of SPLP's maintenance activities.
IN 23.b	Provide a description of the "Travel Lanes" that are shown on your project plans. This description should include:	NA - Heading
IN 23.b.i	The purpose of these features. 25 Pa. Code §105.13(e)(1)(iii)	The terms have been revised to indicated Travel LOD and Clearing and Travel LOD are referenced and labeled on the Aerial Site Plan drawings (Attachment 7, Tab 7A). The definitions and purposes are provided in the revised Project Description provided in Attachment 9.
IN 23.b.ii	Whether these features will be temporary or permanent. 25 Pa. Code §105.13(e)(1)(iii)	When these area fall within the Permanent ROW or Easement as defined in the Project Description provided in Attachment 9 they are considered to be permanent impacts as defined by DEP within the Joint Permit Application instructions. When they are outside of these areas they are considered to be temporary as defined by DEP within the Joint Permit Application instructions.
IN 23.b.iii	The overall impact these features will have on aquatic resources. 25 Pa. Code §105.13(e)(1)(x)	These types of crossing have been only sited across aquatic resources when need to facilitate access and installation. Wetlands and streams will be crossed using BMPs provided within the E&S Plan. There will be no trenching/excavation in these areas.
IN 23.b.iv	The crossing methods (e.g., mats, pads) that will be used to cross resources. 25 Pa. Code §105.13(e)(1)(iii)	All temporary wetland and stream crossing methods are noted on the aerial site plans provided in Attachment 7, Tab 7A and on the aquatic resource impact tables provided in Attachment 11. The details of the noted methods are provided with the Project's E&S Plans and are also presented and discussed in the Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4.

<p>IN 23.c</p>	<p>The plan views provided do not show a permanent right-of-way proposed over areas where HDD installation is proposed. Describe any clearing or maintenance activities that are proposed to occur over areas where your pipeline installation will utilize HDD or bore methods to install the line. 25 Pa. Code §105.13(e)(1)(iii)</p>	<p>The Project Description located in Attachment 9 has been revised to define the nomenclature of the terms discussed below, and the aerial site plans located in Attachment 7, Tab 7A have been revised 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.</p> <p>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.</p> <p>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.</p>
----------------	---	--

IN 24	The impacts described under Section 2.3 of your Mitigation Plan do not seem to match elsewhere in the application. Revise accordingly. 25 Pa. Code §105.13(e)(1)(iii)	The Impact Avoidance, Minimization, and Mitigation Procedures provided in Attachment 11, Enclosure E, Part 4, replaces the Mitigation Plan provided previously and has been reviewed and updated, as necessary, to ensure accuracy and consistency of application materials.
IN 25	Stormwater Consistency Letters from the following municipalities have not been provided: Burrell and East Wheatfield. 25 Pa. Code § 105.13(e)(1)(v)	<p>SPLP sent requests for consistency determinations to Burrell Township in December 2015 and February 2016; however, the Township has not been responsive to SPLP. Therefore no consistency letter from the Township is available. In accordance with guidance from DEP, an analysis of the Project's impact on the Stormwater Management Plan is provided in Attachment 14 of the Application.</p> <p>25 Pennsylvania Code, Chapter 105 Regulations (105.13(e)(1)(v) requires that a project application be accompanied by a stormwater management analysis and a letter from the county or municipality's comments on the analysis if a watershed stormwater management plan has been prepared or adopted under the Storm Water Management Act (32 P. S. § § 680.1—680.17). East Wheatfield Township does not have a stormwater management plan adopted in accordance with the Act 167 Stormwater Management Act. Therefore, the Project is not required to provide a stormwater management consistency request letter to the Township for Chapter 105 compliance.</p>

IN 26	Floodplain Management Consistency Letters have not been provided for the following municipalities: Burrell, East Wheatfield, and West Wheatfield 25 Pa. Code § 105.13(e)(1)(vi)	25 Pennsylvania Code, Chapter 105 Regulations (105.13(e)(1)(iv) 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 Burrell Township, West Wheatfield or East Wheatfield Townships. Therefore, the Project is not required to provide floodplain management consistency letters from these Townships for Chapter 105 compliance.
IN 27	The proposed gas line open cut appears to be located directly over the existing gas line. Please clarify. (Refer to plan sheet ES-2.52). 25 Pa. Code § 105.13(f)(1)(i)	The location of the existing pipeline has been corrected. No conflict exists.
IN 28	You have indicated the pipe line is to follow the existing Mariner East Pipeline right-of-way. The plans show the location of the existing pipeline, however, the aerial photography included in the application indicates portions of the area are heavily forested or constructed under existing structures. Was the ME1 pipeline constructed as shown on the plans? Please clarify. 25 Pa. Code §105.13(e)(1)	As shown on the aerial site plans located in Attachment 7, Tab 7A, the Project follows the existing Mariner East/SPLP pipeline ROW upon entering Indiana County from the west, then departs from the existing SPLP ROW to avoid congested developed areas in the Blairsville area, and then rejoins the SPLP corridor on the east side of Blairsville to continue for the remainder of the distance in the county. While it rejoins the SPLP ROW, there are several other minor-length departures from this ROW made to avoid existing structures/development and other constraints. Where the route departs SPLP ROW, it follows other types of existing utility corridors for the majority of its length. The existing SPLP ROW is located as depicted, and the width of vegetation clearing/maintenance is likely less than 50 feet wide (the existing SPLP pipeline is 8 inches in diameter, much smaller than the proposed pipelines).

IN 29	In order to ensure adherence to Threatened and Endangered species restrictions and avoidance measures that are part of any PNDI clearances, the Plans and drawings need to clearly identify these locations and provide construction notes and seasonal restrictions. Both the plans for this application (JPA) and the plans for the E&S Permit (ESG 05 000 15 001) will need to be revised to include this information. 25 Pa. Code §§105.13(e)(1)(x), 105.13(g) and 105.23	To ensure contractors are provided with up-to-date information regarding stream designations and restrictions, SPLP has developed a state-of-the-art web-based mapping application that is required to be used by contractors to determine all special environmental restrictions such as PNDI and trout stream restrictions. All of the restrictions and avoidance measures approved by PNDI agencies are included in the Project Description as a summary table. These restrictions and avoidance measures are also in the PNDI agencies' final determination letters and accepted Conservation Plans that are also part of the Project Description (See Attachment 9). In addition, SPLP will implement a comprehensive Environmental Training and Inspection program designed specifically to ensure that contractors are appropriately notified of the restrictions and are adhering to such restrictions.
IN 30	If any changes to the proposed route occur, revise the application to reflect these changes. 25 Pa. Code §105.21(a)(1)	The attached Application represents the proposed facilities and workspaces.
IN 31	Revise the fee calculation worksheet to reflect any alterations in the reported impacts. 25 Pa. Code §105.13(c)(2)(iii)	The fee calculation worksheet has been updated to represent the current proposed location of the pipeline as well as the proposed impacts to aquatic resources through the construction and operation of the Project.

IN 32	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
IN 32.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 for the Project has been added to the application materials and is located in Attachment 11, Enclosure E, Part 1 and evaluates the Project as a whole. 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.
IN 32.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.

IN 32.b.i	Antidegradation Analysis - Prepare and submit an analysis and information that addresses consistency with State antidegradation requirements contained in Chapters 93, 95 and 102 (relating to water quality standards; wastewater treatment requirements; and erosion and sediment control) and the Clean Water Act (33 U.S.C.A. § § 1251—1376) for this entire project and other potential or existing projects. 25 Pa. Code § 105.14(b)(11).	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.
IN 32.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 in Attachment 11, Enclosure E, Part 2.
IN 32.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 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	A stand-alone Cumulative Impacts Analysis has been added to the application materials and is located in Attachment 11, Enclosure E, Part 6.

	entire project, as a whole referencing each of the applications for the entire project. 25 Pa. Code §§ 105.14(b)(14); and 105.15.	
IN 32.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.
IN 32.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)(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 Attachment 11, Enclosure E, Part 4.

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@tetrattech.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.