TETRA TECH

February 6, 2017

By FEDERAL EXPRESS

Mrs. Ann Roda
Director, Program Integration
Department of Environmental Protection
Rachel Carson State Office Building
400 Market St.
Harrisburg, PA 17101

Re: Sunoco Pipeline L.P. – Pennsylvania Pipeline Project (Mariner East II);
Chapter 105 Dam Safety and Waterway Management Joint Permit Applications; Washington DEP File E63-674, Allegheny DEP File E02-1718, Westmoreland DEP File E65-973, Indiana DEP File E32-508, Cambria DEP File E11-352, Blair DEP File E07-459, Huntingdon DEP File E31-234, Juniata DEP File E34-136, Perry DEP File E50-258, Cumberland DEP File E21-449, York DEP File E67-920, Dauphin DEP File E22-619, Lebanon DEP File E38-194, Lancaster DEP File E36-945, Berks DEP File E06-701, Chester DEP File E15-862, Delaware DEP File E23-524
Final Technical Deficiency/Clarification Response

Dear Ms. Roda:

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) remaining Technical Deficiency comments and clarification requests, regarding the Chapter 105 Joint Permit Application (Joint Permit Application) for the Pennsylvania Pipeline Project (Project or PPP as defined in the application). For ease of your review, each DEP item is set forth verbatim below, followed by a narrative response with the location of supporting information if applicable.

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Comments and Responses to DEP Final Technical Clarifications/Deficiencies

I. Overall Application Items		
Overall A-1.	The Comprehensive Environmental Evaluation was presented as a broad, overarching discussion of the project and its potential direct, indirect and cumulative effects on waters of the Commonwealth. However, the details of the application do not support the broad points in some instances. In an effort to demonstrate the overall project consistency with State antidegradation requirements, the applicant provided an antidegradation analysis. Each County-specific application (Enclosures C&D) does not specifically discuss the secondary impacts to watercourses from the riparian loss related to antidegradation. One focus of this analysis is the reduction in temporary construction ROW at stream crossings from 75 feet to 50 feet, which the DEP recognizes as a good protective measure, and avoidance and minimization effort on waters of the Commonwealth. However, there are instances, without justification (mainly in Berks and Cumberland Counties), where temporary construction ROWs are up to 100 feet within 10 feet of the stream in HQ/EV/CWF watersheds. Please further reduce the temporary construction ROW in HQ/EV/CWF watersheds. Additionally, reforesting these areas	As presented throughout the Application, the Project will not result in the loss of any riparian areas as there will be no permanent conversion of vegetation to developed/non-vegetated areas within the riparian area of the streams crossed by the Project, and all temporary workspaces will be allowed to revert to their original cover, including forest and scrub-shrub vegetation. Specifically, all riparian areas disturbed during construction will be restored/revegetated in accordance with the Chapter 102 requirements and will be seeded with an herbaceous seed mix (meadow) to promote quick stabilization and establish erosion control. Review of the Water Quality Antidegradation Implementation Guidance (DEP 2003) indicates there are no specific requirements related to the identification of secondary and/or indirect impacts associated with antidegradation. However, as presented in SPLP's Antidegradation Analysis (Attachment 11, Enclosure E, Part 5), the Project will protect and maintain the existing/designated stream uses and water quality of the HQ streams and EV streams/wetlands that are temporarily impacted by construction and no secondary impacts to these resources, associated with antidegradation, are anticipated. A detailed review and discussion of potential secondary impacts to the stream and wetland resources crossed by the Project is provided in Section 4.0 of the Resource Identification

	would reduce the potential impacts to streams from riparian forest loss. Thermal impacts from the forest riparian buffer loss in these instances should be discussed and addressed to satisfy the requirements of both Chapter 105 and 102.	and Project Impacts report (Attachment 11, Enclosure E, Part 2). Per Chapter 105, there are no regulated buffers associated with wetland and stream resources in the Commonwealth of Pennsylvania. The 105 regulations require that the Project comply with the antidegradation requirements contained in Chapters 93, 95, and 102 (105.14b(11)). As presented in the Project's Antidegradation Analysis (Attachment 11, Enclosure E, Part 5), the Project complies with these regulations and will not alter the existing/designated stream uses of any of the water resources crossed and will protect and maintain the water quality of all HQ/EV resources, including EV wetlands, affected by the Project. In addition, the Project has requested a waiver regarding riparian buffers under 102.14(d)(2)(ii) for linear projects, including pipelines, and has provided the justification for such waiver in the Chapter 102 Site Restoration and PCSM Report. As presented in the Project's Resource Identification and Project Impacts (Attachment 11, Enclosure E, Part 2), to avoid and minimize vegetation clearing and habitat fragmentation, SPLP has co-located the alignment of the pipeline with existing SPLP owned and operated ROWs to the maximum extent practicable. When co-location (abut and overlap) with existing SPLP ROWs was not feasible or practicable, routing was co-located (abut) with other utility corridors to maximum extent practicable: over 80 percent of the Project ROW length is co-located with

		existing utility line ROWs. In addition, SPLP has also implemented a number of avoidance, minimization, and mitigation measures for wetland and stream resources located in the Project area. Specifically, SPLP has further reduced the width of the construction ROW to 50 feet across all streams and wetlands starting 10 feet landward of the streambanks; limited the land disturbance to the excavated trench line and minor grading at the travel lane crossing, as required; planned to leave roots/stumps, to the extent possible, so that the roots stabilize the soils (minimize erosion) and re-establishment of native vegetation is facilitated; implemented the trenchless (i.e., conventional bore and HDD) crossing methods where practicable, and identified the dry construction method for all other stream crossings; required the use of timber mats when working in and travelling through wetlands to minimize soil compaction and mixing to promote natural revegetation; and, implemented erosion and sediment control measures for all land disturbances in accordance with DEP's Erosion and Sediment Pollution Control Program Manual (DEP 2012) including incorporating ABACT BMPs to further reduce potential impacts to HQ/EV resources crossed by the Project. In uplands, SPLP has limited the construction workspace to 75 feet in width, inclusive of a minimal 50-foot-wide permanent ROW and a 25-foot-wide temporary construction ROW, to the extent practicable. However, there are some areas where additional temporary workspace and spoil space is required to ensure safe construction practices and to

		avoid impacts to sensitive resources (i.e., conventional bore staging areas). SPLP has sited these additional temporary workspaces to avoid impacts to stream/wetland resources and residential areas (landowner requests) while maintaining a safe and efficient work area for installation of the pipelines. The different types of workspaces are defined within the Project Description provided as Attachment 9. In response to DEP's comment, SPLP has reviewed the temporary workspaces located in riparian zones and has not identified any further opportunities to reduce these workspaces. In some locations, the Project requires clearing of overhanging vegetation along streams at a discrete crossing location (i.e., 50-foot-wide permanent ROW). SPLP believes that the incremental widening of an existing ROW or creation of a new ROW will not result in a detectable thermal change. As previously stated, a number of the riparian areas associated with the streams crossed are wetland areas that will be restored to their pre-construction vegetation, except for a minor area of forested wetland (0.405 acre). As a result of the proposed dry stream crossing measures, limiting clearing to the minimum width practicable, and restoring and revegetating the streambanks and buffering wetland areas, SPLP believes secondary impacts as a result of clearing vegetated riparian buffers will be non-detectable and insignificant. In response to DEP's comment and concerns regarding riparian area impacts, SPLP will restore the temporary

		workspaces of the 150 foot riparian buffers of HQ/EV watershed streams and 100 feet of CWF streams to their pre-existing condition.
Overall A-2.	Mitigation Plan: The following comments pertain to the Compensatory Wetland mitigation plan. Note that these comments apply to all applications which require compensatory mitigation for forested to emergent wetland conversion. • Confirm that a bog turtle habitat screening was performed and that a US Fish and Wildlife Service clearance is provided for the proposed wetland plantings. • Confirm that PNDI clearances provided by the resource agencies account for the proposed work at the mitigation site. • The mitigation plan states that PFO wetlands improve sediment/toxicant retention and nutrient removal. However, the Environmental Assessment within the application states that PEM wetlands improve sediment/toxicant retention and nutrient removal. Clarify the discrepancy and ensure uniform functional assessment across the application. • The selected mitigation site is identified as currently having several functions and values. Provide an explanation for why this site was chosen as opposed to wetlands which are in need of functional uplift and explain how this adequately compensates for the lost	The Project's Compensatory Mitigation Plan document (Attachment 11, Enclosure F) has been revised to address DEP's comments and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

	functions and values from the proposed impacts. • The Compensatory Wetland Mitigation should be constructed prior to or concurrent with impacts, not after. Revise the Compensatory Mitigation Plan accordingly. • Provide justification for why this site was selected, why compensatory mitigation cannot be completed in the watersheds where impacts are proposed, and how it compensates for impacts outside of the watersheds. • Provide a demonstration to show that the proposed plantings will not negatively affect the current functions and values of the wetlands. Given the numerous functions provided by the existing wetland, provide an evaluation of potential functional loss expected from the proposed plantings.	
Overall A-2. (Cont.)	The plans for both the ESCGP-2 and Chapter 105 applications need to be consistent with the data and information provided on the correct classification of wetlands. Example: 1. York County E&S plans-Sheet ES-4.19 and sheets S-H58A & B differ in location of temp crossing and BMPs at the same crossing location. Also Sheets ES-4.20 and S-H56 A&B have the same issue. In this same plan sheet area, please provide stream diversion BMP's to be used associated with the HDD laydown area. Any	The legend provided on sheet ES-0.01 identifies the symbol to call out the areas that have site specific stream crossing details provided. This call out states: "Site specific plan drawing area. Site specific topographic survey conducted in this approximate area. E&S control layout on E&S plan may differ from the site specific plan due to additional survey conducted in these areas. Site specific plan supersedes E&S plan in these areas." The temporary crossing and E&S control measures provided on the site specific details are to be

	additional resource impacts from the laydown area shall be tabulated and added to the impact table. Also provide details of how this area of stream will be restored in the detail plans for S-H58.	implemented. An additional note is also provided on the E&S plans which states "BMP installation to be adjusted as needed to accommodate actual contours identified in field during various phases of the project." To assure proper and safe installation of all erosion and sedimentation control devices, field conditions and the operations being implemented should always be taken into consideration. The site specific plans depict the locations where streams will be subject to open cut pipeline installation or used strictly as HDD laydown areas. The flow of the streams to be open cut in the vicinity of the HDD laydown areas will be diverted via pump bypass (detail on ES-0.11) in conjunction with the open cut installation. Stream diversion will only occur during the pipeline installation across the stream and any laydown activities in the area of the stream will not impact the stream. Site specific plan S-H58–B details the restoration of the area of the stream impacted by the pipeline installation. Disturbance of the stream outside of this area will be avoided.
Overall A-3.	All public water supplies and their contacts should be identified along the corridor as previously requested.	The Project's Water Supply Preparedness, Prevention, and Contingency Plan (Attachment 12; Tab 12B) has been updated with all new water supplies identified. The correspondences with each supply owner/operator has also been updated. The updated plan has been revised and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
Overall A-4.	Additional justification for the avoidance and minimization of wetland impacts as required by §105.18a regarding the selection of the 200-foot survey width, and identified opportunities outside	SPLP's response is detailed within a document titled "*Response to DEP 01-27-17 105 Comments No 4 and 5"* and is posted to the SharePoint site located

	of and along the corridor should be provided. Other pipeline projects had survey widths of up to 600 feet. Please address the environmental impact in the justification and describe the avoidance and minimization of wetland impacts within the 200-foot corridor.	here: **MEII DEP Agency Documentation SharePoint Site**
Overall A-5. (RE: 8.b.v)	SPLP's primary reason regarding avoidance/minimization is co-locating within the existing ROW. In the Trenchless Feasibility Assessment, they define alternative routing for each wetland crossing, but then dismiss the alternative due to costs and logistics under one of the criteria of 105.18.a. Your alternatives analysis [Item 11, Enclosure E, Part 4 provides route alternatives to avoid wetland crossings but does not meet the requirements of 105.14(b)(7) justifying why route, or design alternatives cannot be used to avoid or minimize the adverse environmental impact. Your alternatives analysis does not demonstrate with reliable or convincing evidence that other less impacting alternatives are practicable in accordance with 105.18a(b)(3). You should further assess which wetland crossings of EV wetlands, can be avoided through trenchless technologies, and/or re-routing around the wetland. Include in this assessment the impacts of adjacent wetlands and waters and identify PNDI issues within the potential re-route. Provide an expanded alternative analysis which addresses these issues. [105.13(d)(1)(viii)]. Refer also to 105.18a(a)(3) or 105.18a(b)(3) for a definition of "practicable alternatives.	SPLP's response is detailed within a document titled "*Response to DEP 01-27-17 105 Comments No 4 and 5"* and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

Overall A-6.a (RE: 3.g)	Need additional data on pullback areas that impact wetlands – Chester HDD PA-CH-0100.0000-RD. Investigate and describe pull back alternatives that will avoid and/or minimize impacts to WLC-42 and C-47, while avoiding impacts to WL C-43. Chester Aerial 39 of 98. All – Alternatives exist to avoid direct impacts to EV Wetlands (see comment 8.b.v.).	The HDDs to the northwest and southeast of the workspaces where wetland C42 is located are long (over 2,000 feet) and designed to avoid impacts to PFO wetlands (C43, C37) as well as infrastructure and existing development occurring along both drill alignments. One reason for having the HDDs as designed is to provide the greatest length of pullback possible, the largest available room for the needed workspace, avoidance of a large PFO wetland (C43) to the immediate west, and to minimize disturbance of nearby businesses. The area selected was the longest in terms of length for pullback strings and provides the most available workspace in this highly constrained area. In the case of HDDs, having longer pullback segments means the time needed to complete the drill is reduced. Reducing the length of each pullback segment requires the HDD operator to stop pullback more often in order to weld/x-ray/coat each segment of pipe. Pullback is planned through wetland C47 for these same reasons. Pullback impacts in C42 and C47 are aligned within the same workspaces that will be used to open trench the wetland for installation of the pipeline. Limiting the two activities to the same LOD provides further minimization of impacts.
Overall A-7	The PE certification language provided in Chapter 105.13(j) should be provided in all Chapter 105 permit applications. This language cannot be modified.	The revised PE certification language is provided for all Chapter 105 permit applications in a document titled "*PPP 105 Atts 7, 13-16 REV Slipsheets – 020117"* and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
Overall A-8	Revise the impacts table(s) to provide an accurate linear footage of stream impact associated with your project.	Each impact table provides the linear footage of each stream within the permanent and temporary workspaces. These values are located under the column

		"Stream Disturbance Length in ROW (feet)" and sub columns "Perm", "Temp", and "Total". The comment was clarified by DEP to request that totals be provided at the end of the impact table for these columns. These totals have been added to the impact tables. All 17 county impact table revisions are posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
Overall A-9	A footnote should be added to your impacts table(s) that categorizes potential de-minimis and temporary impacts for temporary water withdrawals, such as temporary intake structures and appurtenant works, including portable pumps, which are associated with various construction or testing activities that are proposed as part of this project.	All of the impact tables in counties where withdrawal and intakes are planned have been updated with the following footnote. "*At this location, minor temporary impacts for temporary water withdrawals to facilitate hydrostatic testing of the mainline and/or HDD pipeline will occur in addition to the pipeline installation. This includes temporary intake structures and appurtenant works, including portable pumps and hoses and anchors.*" All 17 county impact table revisions are posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
Overall A-10	Regarding HDD crossing *HDD PA-WA-0103.0000-RD (S16, S250),* your Inadvertent Return Assessment states, "The drill will cross 56 feet below Linden Creek Road, 41 feet below Linden Creek, and 25 feet below S250. The 20" drill will closely follow the existing ME1 12" pipeline drill, which had an inadvertent return." Regarding this statement: 25 Pa. Code §§105.301(10). The narrative refers to S16 as Linden Creek, when all other documents refer to S16 as Little Chartiers Creek. Please clarify which is correct and revise your application as necessary.	The risk assessment and the HDD plan have been reviewed again by project engineers and geologists. The review has resulted in a HDD design change that further reduces the potential for an inadvertent return. The Linden Road/Little Chartiers Creek HDD is now 20 feet deeper than the 12 inch pipeline. This revised HDD keeps both the vertical and horizontal radius at 2,000 feet which is better for stresses as well as head pressure. This does not result in a change to the project LOD. The revised risk assessment and HDD drawing for this crossing are posted to the SharePoint

	Discuss the inadvertent return that occurred at this location during the installation of ME1. At a minimum, this discussion should include: • Why the inadvertent return occurred. • The depth of the ME1 pipeline at the resource crossings. • What impacts to aquatic resources occurred as a result of the IR. • How the previous occurrence of an IR at this location was accounted for in the design of the proposed crossing. • Lower risk alternatives that were evaluated before the HDD crossing was chosen as the preferred alternative, and why those alternatives were not chosen.	site located here: **MEII DEP Agency Documentation SharePoint Site**
Overall A-11.	Karst area near Exton and the East Whiteland compressor branch present additional risks of IRs during HDD. Provide a detailed assessment of measures to reduce the risk of drilling in these area. There are two areas are the most concerning, especially Exton. There are carbonate rocks, karst surface depressions; and identification of other public water supplies (groundwater or surface water) within one mile. The "water supply areas" geography used in the report is irrelevant to well locations. Locations assessed as medium risk to water wells should have more monitoring and response during the HDD process and for an extended time period after. Also risk categorization should include the distance from the	The HDD locations of the East Whiteland compressor branch through Exton encompass HDD plan and profile sheets PA-CH-0199.000, PA-CH-0212.0000 and PA-CH-0219.000. Along these HDDs, three public water supply well locations are located within 1,500 feet of the HDDs as confirmed with the water company owner Aqua PA; SPLP has met with the water company to review these well locations and has prepared a HDD monitoring program that includes: • Reviewed distances from each pumping well to the corresponding HDD locations; • Received operational data from Aqua PA on the well yields and estimated service numbers; • Reviewed plan and profile individual HDD elevations in relation to the well depths,

	HDD to the wells and the available categories indicating the amount of water and people supplied from the well. Groundwater impacts from an inadvertent return cannot be directly visually observed from the surface. Any loss of circulation is the only indicator of drilling fluid migrating out of the borehole into the groundwater.	construction characteristics, and pumping rates of each well with Aqua's staff hydrogeologist and operations personnel; • Identified one well location (2 wells at the location) (Hillside well - plan and profile PA-CH-0219.000) where the HDD is located within 300 feet of the Aqua wells and where HDD elevations need to be re-evaluated to address Aqua concerns about potential turbidity increases from HDD activities: o SPLP installed a monitoring well in the HDD pathway adjacent to the Aqua well and conducted geophysical testing to document the geologic profile and water bearing horizons and compared them to the Aqua wells construction specifications; o SPLP prepared and submitted a scope of work to perform an aquifer test of its newly constructed monitoring well for Aqua review and agreement; o Data collected and evaluated from these activities will provide insight as to how the HDD depths will be modified to best eliminate impact to the Aqua well; and o Development of a well shutdown schedule and monitoring program during adjacent HDD construction for Aqua approval. • Two other locations (Shoen Rd - two wells; Milford - one well) were identified and measured to be in excess 1,100 feet of where the HDD pathway crosses karst environment.

		These locations will be monitored during HDD construction by Aqua personnel in coordination with SPLP's HDD drilling schedule. All HDDs installations will be monitored by PA Professional Geologists.
Overall A-12.	Misidentified wetlands. There is at least one example in which the wetlands have been misidentified. For example, in Perry County the identification provided does not match the data sheets and aerials.	During the project meeting with the DEP on February 2, 2017, Scott Williamson of the South-central Region provided Brad Schaeffer of Tetra Tech the following listing of wetlands to review: M29, I56, I54, A49, B21, WL21, W33d, WA9, WA12, Q63, K54, and K55. SPLP has reviewed the wetland delineation sheets, photographs, wetland narrative, and aerial photographs and confirmed the classification designation for all but three of the wetlands where it was determined that a field check was warranted. Wetlands M29, A49, and W33d were field investigated on February 4 and the classifications were verified to be correct at W33d and A49, the classification of a small portion of M29 changed to PSS, however, this may be due to the time since the delineation was performed. M29 is an HDD and will not be impacted. The narrative and photo-log regarding this field effort will be provided on the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
II. Southeast Regional Office		
SERO-B.1. (RE: 3.g.)	Need additional data on pullback areas that impact wetlands – Chester HDD PA-CH-0100.0000-RD. Investigate and describe pull back alternatives that	Same as response to comment Overall A-6.a and repeated here:

	will avoid and/or minimize impacts to WLC-42 and C-47, while avoiding impacts to WL C-43. Chester Aerial 39 of 98.	The HDDs to the northwest and southeast of the workspaces where wetland C42 is located are long (over 2,000 feet) and designed to avoid impacts to PFO wetlands (C43, C37) as well as infrastructure and existing development occurring along both drill alignments. The main reason for having the HDDs as designed is to provide the greatest length of pullback possible, the largest available room for the needed workspace, avoidance of a large PFO wetland (C43) to the immediate west, and to minimize disturbance of nearby businesses. The area selected was the longest in terms of length for pullback strings and provides the most available workspace in this highly constrained area. In the case of HDDs, having longer pullback segments means the time needed to complete the drill is reduced. Reducing the length of each pullback segment requires the HDD operator to stop pullback more often in order to weld/x-ray/coat each segment of pipe. Pullback is planned through wetland C47 for these same reasons. Pullback impacts in C42 and C47 are aligned within the same workspaces that will be used to open trench the wetland for installation of the pipeline. Limiting the two activities to the same LOD provides further minimization of impacts.
SERO B.2. (RE: 3.i.)	Need note added to the E&S Plans that states that the 20" and 16"pipes will be installed concurrently and/or immediately sequentially.	Wetlands, streams, and uplands crossed by the first installation will be temporarily stabilized and restored in accordance with the E&S Plan with the following exception: For all EV wetlands and streams, SPLP will install the second pipeline immediately following the installation of the first pipeline, as long as no unanticipated, extraneous circumstances or safety issues are encountered. In these areas, the two pipes

		will be installed in a single disturbance that will not require interim temporary stabilization/restoration. This workspace will further minimize temporary impacts.
SERO B.3. (RE: 8.b.v)	SPLP's primary reason regarding avoidance/minimization is co-locating within the existing ROW. In the Trenchless Feasibility Assessment, they define alternative routing for each wetland crossing, but then dismiss the alternative due to costs and logistics under one of the criteria of 105.18.a. Your alternatives analysis Item 11, Enclosure E, Part 4 provides route alternatives to avoid wetland crossings but does not meet the requirements of 105.14(b)(7) justifying why route, or design alternatives cannot be used to avoid or minimize the adverse environmental impact. Your alternatives analysis does not demonstrate with reliable or convincing evidence that other less impacting alternatives are practicable in accordance with 105.18a(b)(3). Therefore, further assess which wetland crossings, especially crossings of EV wetlands, can be avoided through trenchless technologies, and/or re-routing around the wetland. Include in this assessment the impacts of adjacent wetlands and waters and identify PNDI issues within the potential re-route. Provide an expanded alternative analysis which addresses these issues. [105.13(d)(1)(viii)]. Refer also to 105.18a(a)(3) or 105.18a(b)(3) for a definition of "practicable alternatives.	Same as response to comment Overall A-5 and repeated here: SPLP's response is detailed within a document titled "*Response to DEP 01-27-17 105 Comments No 4 and 5"* and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

SERO B.4. (RE: 14.a & 14.b)	Provide a complete set of Township Consistency Letters as required by 105.13.e.(1)(v) and (vi).	All of SERO Township consistency letters received to date will be provided to PADEP as document titled "*SERO Township Consistency 020517*" posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
B.5. (RE: 17.a & 17.b)	All – Alternatives exist to avoid direct impacts to EV WLs (see comment 8.b.v.)	SPLP's response is detailed within a document titled "*Response to DEP 01-27-17 105 Comments No 4 and 5"* and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SERO B.6.	Compensatory Mitigation a. Given the numerous functions provided by the existing wetland, provide an evaluation of potential functional loss expected from the proposed plantings. b. Aerial imagery provided do not appear to support that the wetland was forested since at least 1938. Explain why converting the PEM to PFO is appropriate in this area.	The Project's Compensatory Mitigation Plan document (Attachment 11, Enclosure F) has been revised to address DEP's comments and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SERO B.7.	Mitigation Plan – The following comments pertain to the Compensatory Wetland mitigation plan. a. Confirm that a bog turtle habitat screening was performed and that a US Fish and Wildlife Service clearance is provided for the proposed wetland plantings. b. Confirm that PNDI clearances provided by the resource agencies account for the proposed work at the mitigation site. c. The proposed mitigation sites are in close proximity to the pipeline ROW. Measures	The Project's Compensatory Mitigation Plan document (Attachment 11, Enclosure F) has been revised to address DEP's comments and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

	need to be implemented to ensure the perpetual protection of the mitigation site. The plan indicates that a conservation instrument will be used for long-term protection but no instrument language is provided. Provide a copy of the deed restriction or conservation easement (with approval by a holder) for the mitigation site. d. The mitigation plan states that PFO wetlands improve sediment/toxicant retention and nutrient removal. However, the Environmental Assessment within the application states that PEM wetlands improve sediment/toxicant retention and nutrient removal. Clarify the discrepancy and ensure uniform functional assessment across the application. e. The selected mitigation site is identified as currently having several functions and values. Provide an explanation for why this site was chosen as opposed to wetlands which are in need of functional uplift and explain how this adequately compensates for the lost functions and values from the proposed impacts. f. The Compensatory Wetland Mitigation should be constructed prior to or concurrent with impacts, not after. Revise the Compensatory Mitigation Plan accordingly. g. Provide justification on why this site was selected, why compensatory mitigation cannot be completed in the watersheds where impacts are proposed, and how it	

	compensates for impacts outside of the watersheds. h. Provide a demonstration to show that the proposed plantings will not negatively affect the current functions and values of the wetlands.	
E22-619 - Dauphin County	The following comments were noted in the September 6, 2016 technical deficiency letter and remain with the application.	NA
SERO-Dauphin 1.	County line between York and Dauphin does not agree across application. – Revise plans to be consistent in showing that the county line is located on York County bank of Susquehanna River.	Each figure within the Dauphin County application has been reviewed to ensure the county line between York and Dauphin counties is located on the west side of the Susquehanna River. The HDD drawings were found to have incorrectly depict the county line. The HDD plans for the 16 and 20 inch lines at the Susquehanna River crossing have been updated and have been posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SERO-Dauphin 2.	Susquehanna HDD Crossing intersects with multiple existing pipelines – identify these other pipelines and locate them on site plans and cross-sections. Explain how impacts to these existing pipelines will be avoided. (located on the plans.)	The site plan sheets for the Susquehanna River crossing have been updated with additional utility crossing data. The 16 and 20 inch plans depict the same utilities both in the plan and profiles. All project HDDs were planned with the knowledge of the location of all existing utilities and conflicts are avoided that meet the PHMSA and DOT requirements for pipeline spacing. The revised aerials site plans and HDD plans for the 16 and 20 inch lines at the Susquehanna River crossing have been updated and have been posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

E67-920 - York County	NA	NA
SERO-York 1.	York County E&S plans- Sheet ES-4.19 and sheets S-H58A & B differ in location of temp crossing and BMPs at the same crossing location. Also Sheets ES-4.20 and S-H56 A&B have the same issue. In this same plan sheet area, please provide stream diversion BMP's to be used associated with the HDD laydown area. Any additional resource impacts from the laydown area shall be tabulated and added to the impact table. Also provide details of how this area of stream will be restored in the detail plans for S-H58.	The legend provided on sheet ES-0.01 identifies the symbol to call out the areas that have site specific stream crossing details provided. This call out states: "Site specific plan drawing area. Site specific topographic survey conducted in this approximate area. E&S control layout on E&S plan may differ from the site specific plan due to additional survey conducted in these areas. Site specific plan supersedes E&S plan in these areas." The temporary crossing and E&S control measures provided on the site specific details are to be implemented. An additional note is also provided on the E&S plans which states "BMP installation to be adjusted as needed to accommodate actual contours identified in field during various phases of the project." To assure proper and safe installation of all erosion and sedimentation control devices, field conditions and the operations being implement should always be taken into consideration. The site specific plans depict the locations where streams will be subject to open cut pipeline installation or used strictly as HDD laydown areas. The flow of the streams to be open cut in the vicinity of the HDD laydown areas will be diverted via pump bypass (detail on ES-0.11) in conjunction with the open cut installation. Stream diversion will only occur during the pipeline installation across the stream and any laydown activities in the area of the stream will not impact the stream. Site specific plan S-H58–B details the restoration of the area of the stream impacted by the pipeline installation. Disturbance of the stream outside of this area will be avoided.

SERO-York 2.	Comment from York County Conservation District (YCCD) about crossing at S-H56 where the stream runs under boulders and cannot be seen. What E&S BMP's will be used in this situation?	Project engineers conducted a field visit of the subject site on February 3, 2017, and re-evaluated the crossing design. The Susquehanna River HDD will be extended to the west and therefore will cross under S-H56. This design will only require placement of a travel lane/equipment bridge through the area. The HDD plans for the 16 and 20 inch line have been updated and the York County E&S Plan sheet for this area has also been revised. The new HDD drawings and E&S Plan sheet area have been posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SERO-York 3.	For all counties provide a table listing all the archaeological sites and PHMC clearances or status.	A Phase II study site and avoidance plan with figure summary for the project is provided on the SharePoint site. It is the document titled "*PPP Cultural PII Sites and Avoidance Plans 020317*". The cover letter documenting submission of the latest report to the PHMC is also include on the SharePoint site as "*PPP Cultural Addendum Cover Letter 020117*". The SharePoint site for these documents is located here: **MEII DEP Agency Documentation SharePoint Site .**
Misc: Comments on Water Supply, PPC, IR, & Karst Aspects of the Chapter 105 Applications		
SERO-Misc E&SCP 1.	Karst area near Exton and the East Whiteland compressor branch present additional risks of IRs during HDD. Provide a detailed assessment of measures to reduce the risk of drilling in these area.	The HDD locations of the East Whiteland compressor branch through Exton encompass HDD plan and profile sheets PA-CH-0199.000, PA-CH-0212.0000 and PA-CH-0219.000. Along these HDDs, three public water supply well locations are located within 1,500 feet of the HDDs as confirmed with the water company owner Aqua PA; SPLP has met with the water company to review these well locations and has prepared a HDD monitoring program that includes:

		• Reviewed distances from each pumping well to the corresponding HDD locations; • Received operational data from Aqua PA on the well yields and estimated service numbers; • Reviewed plan and profile individual HDD elevations in relation to the well depths, construction characteristics, and pumping rates of each well with Aqua's staff hydrogeologist and operations personnel; • Identified one well location (2 wells at the location) (Hillside well - plan and profile PA-CH-0219.000) where the HDD is located within 300 feet of the Aqua wells and where HDD elevations need to be re-evaluated to address Aqua concerns about potential turbidity increases from HDD activities: o SPLP installed a monitoring well in the HDD pathway adjacent to the Aqua well and conducted geophysical testing to document the geologic profile and water bearing horizons and compared them to the Aqua wells construction specifications; o SPLP prepared and submitted a scope of work to perform an aquifer test of its newly constructed monitoring well for Aqua review and agreement; o Data collected and evaluated from these activities will provide insight as to how the HDD depths will be modified to best eliminate impact to the Aqua well; and

		○ Development of a well shutdown schedule and monitoring program during adjacent HDD construction for Aqua approval. • Two other locations (Shoen Rd - two wells; Milford - one well) were identified and measured to be in excess 1,100 feet of where the HDD pathway crosses karst environment. These locations will be monitored during HDD construction by Aqua personnel in coordination with SPLP's HDD drilling schedule. All HDDs installations will be monitored by PA Professional Geologists.
SERO-Misc E&SCP 2.	Regarding the PPC Plan incorporate the following comments. Notification of DEP should be immediately by the region's emergency response phone number (484.250.5900). Drinking water intakes that are located downstream must also be notified immediately.	The Preparedness, Prevention, and Contingency Plan provided to DEP in the December 2016 submission provides 484-250-5900 as the Southeast Regional emergency notification number on Page 34 of the PDF. The Inadvertent Return Preparedness, Prevention, and Contingency Plan and Water Supply, Preparedness, Prevention, and Contingency Plan provided to DEP in the December 2016 submission provides notification procedures to DEP and identified public and private water supplies.
SERO-Misc E&SCP 3.	Any well water complaints near the pipeline should be reported to DEP.	The Inadvertent Return Preparedness, Prevention, and Contingency Plan and Water Supply, Preparedness, Prevention, and Contingency Plan provided to DEP in the December 2016 submission provides notification to DEP within 24 hours of receipt of any water supply complaints.
SERO-Misc E&SCP 4.	Risk categorization should include the distance from the HDD to the wells and the available categories indicating the amount of water/people supplied from the well. Groundwater impacts from	Some specific well locations are not available to SPLP because of safety or privacy concerns expressed by the well operator. SPLP has reached out to all of the identified public water suppliers listed within the

	an inadvertent return cannot be directly visually observed from the surface. Any loss of circulation is the only indicator of drilling fluid migrating out of the borehole into the groundwater. a. There are two areas are the most concerning, especially Exton. b. There are carbonate rocks, karst surface depressions, c. and community wells about 400 ft in York and 255 ft in Exton from HDD. d. Any other groundwater or surface water in these areas are also at higher risk. e. The "water supple areas" geography used in the report is irrelevant to the well locations.	revised Water Supply plan and have requested that they provide the location of the well or intake, as well as to provide an opportunity to express any concerns they may have with the proposed project. When higher risk situations or concerns have been raised, such as with Aqua PA, SPLP has consulted with the company in regard to well locations, depths, and PPC activities.
SERO-Misc E&SCP 5.	All water wells within 400 ft. of HDD should be identified for PPC activities.	Some specific well locations are not available to SPLP because of safety or privacy concerns expressed by the well operator. SPLP has reached out to all of the identified public water suppliers listed within the revised Water Supply plan and have requested that they provided the location of the well or intake, as well as to provide an opportunity to express any concerns they may have with the proposed project.
SERO-Misc E&SCP 6.	Locations assessed as medium risk to water wells should have more monitoring and response during the HDD process and for several days after.	Some specific well locations are not available to SPLP because of safety or privacy concerns expressed by the well operator. SPLP has reached out to all of the identified public water suppliers listed within the revised Water Supply plan and have requested that they provided the location of the well or intake, as well as to provide an opportunity to express any concerns they may have with the proposed project. When higher risk

		situations or concerns have been raised, such as the case with Aqua PA, SPLP has consulted with the company in regard to well locations, depths, and PPC activities.
SERO-Misc E&SCP 7.	Please respond to the following comments on the Water Supply and Inadvertent Return PPC plans.	NA
SERO-Misc E&SCP 7.a	Risk categorization should include the distance from the HDD to the wells and the available categories indicating the amount of water and people supplied from the well. Groundwater impacts from an inadvertent return cannot be directly visually observed from the surface. Any loss of circulation is the only indicator of drilling fluid migrating out of the borehole into the groundwater.	Some specific well locations are not available to SPLP because of safety or privacy concerns expressed by the well operator. SPLP has reached out to all of the identified public water suppliers listed within the revised Water Supply plan and have requested that they provided the location of the well or intake, as well as to provide an opportunity to express any concerns they may have with the proposed project. When higher risk situations or concerns have been raised, such as the case with Aqua PA, SPLP has consulted with the company in regard to well locations, depths, and PPC activities. Complaints raised also provide indications of migration and the Inadvertent Return Preparedness, Prevention, and Contingency Plan and Water Supply, Preparedness, Prevention, and Contingency Plan provided to DEP in the December 2016 submission provides notification to DEP within 24 hours of receipt of any water supply complaints.
SERO-Misc E&SCP 7.b.	The following should be included in water supply response to any loss of drilling fluid circulation, pressure drop, or inadvertent return: (IR plan 5.1.5 Condition 2 or 3 and others) • Immediately notify PADEP regional office by the emergency phone number. • immediately notify downstream surface water intake's zone A or 6 miles.	As noted by DEP, notifications related to HDD activities are outlined within the Inadvertent Return Preparedness, Prevention, and Contingency Plan. SPLP will adhere to all notification requirements outlined within all of its PPC Plans, which includes notification the regional office emergency phone numbers.

	• Record all well water complaints within 400 ft. of the drilling location and report them to PADEP.	DEP has previously requested that we identify surface water intakes within 1-mile of the resource crossings. SPLP has complied with the 1-mile search request as outlined within the revised Water Supply plan. Accordingly, surface water intake identification out to 6 miles has not been performed. The Inadvertent Return Preparedness, Prevention, and Contingency Plan and Water Supply, Preparedness, Prevention, and Contingency Plan provided to DEP in the December 2016 submission provides notification to DEP within 24 hours of receipt of any water supply complaints, regardless of distance from the project. The overall notification sections of the Water Supply and IR Plans have been revised to clarify notification procedures. The revised plans and attachment will be posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
Complaint Investigation		
SERO-Complaint Investigation 1.	Ongoing site investigation relating to NOV issued after Mariner I IR occurrences In Chester and Delaware Counties. See Attached pdf of NOV. Plans were submitted and Emergency Permits issued for the IRs in Chester County but nothing was ever received for Delaware County. Below are the affected resources: • Mariner I Stream/Wetlands – S-20/W-17 UNT to Chester Creek	All outstanding NOVs are listed within an attachment to the revised Joint Application Form for each county. The Joint Application Form has only been revised to provide the information for Section E: Compliance Review. The areas noted have been restored and SPLP will work with PADEP to resolve any concerns. The revised Joint Application Form and attachment will be posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

	• PPP Project Stream/Wetlands – S-B51, S-B52, S-B53, S-B54, S-B55, WL-B51 (PEM), WL-B52 (PFO)	
III. Southwest Regional Office		
SWRO-B.1.	Regarding inadvertent returns associated with construction of the Mariner East 1 project, and your proposed activities for the Mariner East 2 project: 25 Pa. Code §§105.301(10) The "PPP ME1 Associated IR Locations" Table you have provided does not identify all locations where inadvertent returns occurred during the construction of the Mariner East 1 Pipeline. Ensure that all inadvertent returns that occurred during the project are accounted for in your application and have been considered in the design of your proposed project. If you are proposing to utilize HDD installation methods where previous inadvertent returns have occurred, provide the following information: Why the previous inadvertent return occurred. • The depth of the ME1 pipeline at the resource crossings. • What impacts to aquatic resources occurred as a result of the inadvertent return. • How the previous occurrence of an IR at this location was accounted for in the design of the proposed crossing. Lower risk alternatives that were evaluated before the HDD crossing was chosen as the preferred	The risk assessments and the HDD plans have been reviewed again by project engineers and geologists in regards to the ME1 project IR locations and HDD design. The review has resulted in an HDD design change that further reduces the potential for an inadvertent return at two locations. The Linden Road/Little Chartiers Creek HDD is now 20 feet deeper than the 12 inch pipeline. This revised HDD keeps both the vertical and horizontal radius at 2,000 feet which is better for stresses as well as head pressure. The Hayden Boulevard HDD had an ME1 IR and is 20 feet deeper than the 12 inch pipeline to further reduce the risk of an IR. Both of these design changes do not result in a change to the project LOD. The revised risk assessments and HDD drawings for these crossings are posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

	alternative, and why those alternatives were not chosen.	
SWRO-B.2.	Your response indicates that a Professional Geologist will be included on the environmental inspection team, and this individual must be a "current P.G. in any state". This individual should be a current P.G. in the state of Pennsylvania. Revise your application as necessary. 25 Pa. Code §105.301(10)	The Professional Geologists on the inspection team will be a current licensed P.G. in Pennsylvania.
SWRO-B.3.	The previous TDL included the following comment: "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)." Your response did not provide the qualifications and experience of the geologist, nor did it require the Professional Geologist to be licensed in Pennsylvania. Provide this information. 25 Pa. Code §105.301(10)	The regulatory provisions cited by DEP in this comment do not require SPLP to arrange for a qualified geologist licensed in Pennsylvania to work 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. Nevertheless, as supplemental information, we have used and provide the qualifications and experience of the four (4) Professional Geologists involved with the HDD geotechnical borings and Water Supply Plan and note that all of them are registered in Pennsylvania. They are provided on the SharePoint site located here as the document titled "*PG Pre-Construction Planning Qualifications*": **MEII DEP Agency Documentation SharePoint Site**
SWRO-B.4.	The previous TDL included the following comment: Provide the minimum qualifications and experience requirements you will impose for the contractors that will be performing the HDD crossings." This information could not be located in the response. Provide the information or identify where it is located in the application. 25 Pa. Code §105.301(10)	SPLP's has a number of minimum criteria for selection of contractors that can be considered a qualifying measure for the HDD contractor. For example, SPLP requires each bidding contractor to submit its safety rating that is based on OSHA reportable incidents and evaluates specific job functions. It is a Safety Program evaluation with detailed information from the contractor explaining their programs, contractor

		compliance evaluations, operator requirements, etc. The safety rating will show any major safety violations and any contractor with a poor safety rating will not be selected. The contractor must also submit a list of its last completed projects with reference information. Poor performance on previous projects will disqualify the bidding contractor. Additionally, SPLP generates its bidder list based off of the contractor's performance on previous SPLP projects. Poor performance on previous SPLP projects will disqualify the bidder from future work. SPLP also requires that personnel working around active pipelines be "operator qualified." The operator qualifications are kept current and centrally located in a database that is verified for proper qualifications for each worker performing any tasks around the active pipeline. In addition, SPLP is responsible for meeting the requirements of the issued permits, and their selected contractors are contractually obligated to successfully complete the HDD crossings within the permitted parameters. Due to the diameter of the pipelines, the fact that the installation is welded steel, the length and complexity of crossings, and the significant number of HDDs, only large reputable contractors would be able to successfully complete this project. Smaller HDD companies do not have the required amount or size of equipment/rigs, support system on the east coast to maintain consistent operations, or the ability to meet the substantial insurance and performance bond requirements.

SWRO-B.5.	It appears as though your coordination with Public Water Suppliers does not include all of the suppliers in the specified area. Refer to the attached Water Supply table and ensure you that you have correctly identified all of the suppliers and locations within the specified area. 25 Pa. Code §105.301(10)	During the project meeting with the DEP on February 2, 2017, Rita Coleman of the Southwest Region provided Robert Simcik of Tetra Tech a listing of two entities that were not contacted by Tetra Tech for information regarding their public water supply. Those two entities have been determined to be outside the 1-mile search radius criteria provided by DEP. Regardless, the Greater Johnstown Water Authority - Saltlick and Municipal Authority of Westmoreland County - McKeesport were sent notifications of the project requesting information and concerns regarding their water supply in a correspondence dated February 4, 2017. These two water suppliers have been added to the Water Supply Plan contact list. The revised Water Supply Plan with the correspondence, proof of delivery and contact list is provided on the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SWRO-B.6.	Section 5.2.2 of your Water Supply Assessment PPC Plan seems to indicate that Public Water Supply Wells access deeper aquifer layers than private water supply wells. While it is true that public wells are typically drilled deeper than private wells, many public wells also often rely on shallower (50-100 feet) water-bearing zones for their source water. Revise your PPC Plan to acknowledge this reliance on shallower water-bearing zones and prepare for any risks associated with impacts to these zones. 25 Pa. Code §105.301(10)	The Water Supply Plan has been revised to acknowledge, where appropriate, the reliance on shallow water bearing zones and the associated risks. The revised plan is provide on the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

SWRO-B.7.	The "Rip-Rap Bank Stabilization Detail" (ES-0.20) should be revised to show natural streambed material overtop of the rip-rap as is described under Section 8.3 of the Impact, Avoidance, Minimization, and Mitigation Procedures. A note should also be added to this sheet to clearly state that natural streambed material should be placed throughout and overtop of the rip-rap where feasible. 25 Pa. Code §105.13(e)(1)(ix)	The ES-0.20 has been revised to show the restoration of natural streambed material overtop of the rip-rap and the following note added to the drawing "Natural streambed material is to be restored throughout and overtop the rip-rap where feasible". The E&S Plan detail has been updated for all of the project's E&S Plans. The revised sections of the E&S Plans including the revised detail are provided on the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SWRO-B.8.	In locations where rip-rap is proposed, evaluate the feasibility of reducing the overall length of rip-rap placement to minimize stream impacts while still ensuring that the pipeline is adequately protected. If the proposed length of rip-rap is necessary, provide documentation that demonstrates the necessity of the length that is proposed. 25 Pa. Code §105.13e(1)(viii)	The rip rap proposed is the worst-case scenario and a result of the requirement to provide PCSM BMP protection for all resources within the LOD. Given the reduced workspace available at stream crossings, disturbance of the entire bank may be required for safe installation of the pipeline. Regardless, effort will be made to reduce the areal extent of bank disturbance, and ultimately rip rap will only be placed where disturbance has occurred. The Project's Environmental Inspectors will ensure any reductions in disturbance and associated use of rip rap are thoroughly documented, justified, and approved.
SWRO-B.9.	Your response states that "No Mowing" signs will be placed in PSS areas that will be restored within the permanent right-of-way. Clarify if similar signs will be placed at areas where PFO wetlands are proposed to be restored. 25 Pa. Code §105.13(e)(1)(ix)	Within the referenced Avoidance, Minimization, and Mitigation Procedures document provided in the December 2016 application as Attachment 11, Enclosure E, Part 4, the following is indicated in Section 9.3 as a procedure for the PFO and PSS restoration areas: "PSS and PFO restoration areas will be protected with "no-mow" signs or other restrictive barriers as determined by SPLP."
SWRO-B.10.	As previously requested, revise your impact table to provide a linear footage of stream impact	Each impact table provides the linear footage of each stream within the permanent and temporary

	associated with your project. 25 Pa. Code §105.13(e)(1)(iii)	workspaces. These values are located under the column "Stream Disturbance Length in ROW (feet)" and sub columns "Perm", "Temp", and "Total". The comment was clarified by DEP to request that totals be provided at the end of the impact table for these columns. These totals have been added to the impact tables. All 17 county impact table revisions are posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SWRO-B.11	The most recent USFWS letter (dated 10/31/16) states, "The Service is awaiting Sunoco's final Migratory Bird Conservation Plan." Provide proof that the USFWS has reviewed and considered your Conservation Plan to be adequate. 25 Pa. Code §105.13(e)(1)(x)	The final Migratory Bird Conservation Plan was submitted to the USFWS on November 23, 2016 and the cover letter and conservation plan are provided within Attachment 6B of the December 2016 application revision. SPLP's project planning has principally adhered to all five of the general recommendations in the USFWS Pennsylvania Field Office's Adaptive Management for Conserving Migratory Birds as described in the submitted plan. SPLP requested within the e-mail submittal on November 23, 2016 if the USFWS had any questions. The USFWS responded on November 28th with a data request to support an analysis they were doing to compare to other Projects. It was an understanding between SPLP and the USFWS, during an August 10, 2016 meeting that the submittal of the Final Plan is voluntary and SPLP would not seek further comment. We are following up with the USFWS regarding this understanding. The November 23, 2016 e-mail to the USFWS and November 28th response is provided in the file titled "*PPP Migratory Bird Plan Update 020417*", and is posted to the SharePoint site located

		here: **MEII DEP Agency Documentation SharePoint Site**.
SWRO-B.12.	You have indicated that coordination with PHMC is ongoing for your project. Provide proof that PHMC has provided final clearance for your project. 25 Pa. Code §105.13(e)(1)(x)	A Phase II study site and avoidance plan with figure summary for the project is provided on the SharePoint site. It is the document titled "*PPP Cultural PII Sites and Avoidance Plans 020317*". The cover letter documenting submission of the latest report to the PHMC is also include on the SharePoint site as "*PPP Cultural Addendum Cover Letter 020117*". The SharePoint site for these documents is located here: **MEII DEP Agency Documentation SharePoint Site**
SWRO-B.13	A footnote should be added to your impact tables that discusses impacts associated with the proposed temporary water withdrawal activities. 25 Pa. Code §105.13(e)(1)(iii)	All of the impact tables in counties where withdrawal and intakes are planned have been updated with the following footnote. "*At this location, minor temporary impacts for temporary water withdrawals to facilitate hydrostatic testing of the mainline and/or HDD pipeline will occur in addition to the pipeline installation. This includes temporary intake structures and appurtenant works, including portable pumps and hoses and anchors."* All 17 county impact table revisions are posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SWRO-B.14.	If instream work is associated with your proposed temporary water withdrawals, ensure that your PNDI search and agency coordination included this activity. If instream work will occur, and was not included in your PNDI coordination, coordinate the activity and obtain any necessary clearances from the appropriate resource agencies. 25 Pa. Code §105.13(e)(1)(x)	An email was sent to Gary Smith at PAFBC on January 4, 2017, that included the withdrawal locations and described the activity. This email also requested any concerns the PAFBC may have in regard to the withdrawals. The PAFBC responded on January 17, 2017, indicating that some additional trout stream timing restrictions would apply to the withdrawal location for the following streams:

		• Snitz Creek (S-A17); 3/1 to 6/15 and 10/1 to 12/31 • Letort Spring Run (S-I48); 10/1 to 4/1 • Tuscarora Creek (S-K74); 3/1 to 6/15 • Frankstown Branch Juniata River (S-L77 and S-M31); 10/1 to 12/31 SPLP has revised its project-wide trout timing restrictions accordingly and will adhere to these restrictions regarding the withdrawal activities at these locations. The USFWS was sent the Project's water withdrawal locations on August 16, 2016, and the USFWS acknowledge receipt on August 17, 2016. The USFWS provided no further comment. The correspondence with the PAFBC is documented within the file titled "*PPP PAFBC Withdrawal Request Reply Docs 020417*" and the USFWS correspondence is documented within the file titled "*PPP USFWS Withdrawal Request Reply Docs 020417*" and both are posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SWRO-B.15.	Regarding your Wetland Mitigation Plan: 25 Pa. Code §105.13e(1)(viii): a. Revise your Wetland Mitigation narrative to include a discussion of the functions and values that will be provided by your proposed mitigation activities.	The Project's Compensatory Mitigation Plan document (Attachment 11, Enclosure F) has been revised to address DEP's comments and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

	b. Your Wetland Mitigation sheets state that planting will occur following the completion of construction. Mitigation activities should start prior to, or at the time when project construction begins. Revise your mitigation plan accordingly. c. Provide a draft copy of your conservation instrument that will be associated with your mitigation sites. Also revise your mitigation narrative to state when this instrument will be completed and provided to the Department.	
SWRO-Cambria 1.	Environmental impacts associated with the northern route of the Cresson-Altoona Bypass have not been discussed in your response. Revise "Figure 2" of Appendix A in your Alternatives Analysis to specifically display streams and wetlands that would be impacted if the northern route were chosen. Naturally Reproducing Trout streams should be identified as well. 25 Pa. Code §105.13e(1)(viii)	The Alternatives Analysis provided in the December 2016 application revision as Attachment 11, Enclosure E, Part 3 demonstrates that the northern route is not a practicable route due to other environmental factors including but not limited to the presence of cultural resources. Analysis or presentation of additional data and subsequent comparison with the current route would not change this determination.
SWRO-Cambria 2.	The "Trenchless Feasibility Analysis" states that trenchless crossings of Wetlands BB147, CC16, CC18, and CC19 are not feasible. Contradictory to this, your impact table and site plans indicate these areas are to be crossed using trenchless methods. Discuss the cause of this inconsistency and any other inconsistencies related to the feasibility of proposed stream and wetland crossings. 25 Pa. Code §105.13e(1)(viii)	Wetland BB147 is included as part of the Kozak Road bore and will not be open trenched. The Kozak Road bore presented the opportunity to minimize the impact to Wetland BB147 and was determined to be present upon final design. The trenchless feasibility analysis for Wetlands CC16, CC18, and CC19 also included Wetlands CC15 and CC13 to represent a potential practicable trenchless crossing. Crossing this group of wetlands as a whole was determined not to be technically feasible.

		However, Wetlands CC16, CC18, and CC19 are all located on the east end of an HDD under Wetland CC17 which was designed to avoid impacts to a large PFO wetland. That group of wetlands is planned to be drilled due to the higher importance to avoid PFO wetland habitats and a large Wetland CC17 wetland complex with PFO habitats. Similar to Kozak Road, these wetlands were captured by the HDD of Wetland CC17 as there was an opportunity to minimize impacts. The impact tables and site plans call out the correct crossing methods.
E63-674 - Washington County	The following comments were noted in the September 6, 2016 technical deficiency letter and remain with the application.	NA
SWRO-Washington 1.	The Applicant provided a statement regarding the Floodplain Management Analysis in the application (Attachment 15). The statement provided must be sealed by the professional engineer that prepared Attachment 15. (Section 105.13(e)(1)(vi))	Tim Dunaway and Robert Simcik both have sealed the Attachment 15 statement. The PE certification is provided in the document titled "*PPP 105 Atts 7, 13-16 REV Slipsheets – 020117"* and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SWRO-Washington 1.a.	The following municipalities have Floodplain Management Consistency Letters that have not been provided: Chartiers, North Strabane: Response: Applicant has indicated that they requested Floodplain Consistency Letters for each municipality in December 2015 and February 2016 and no response has been received from North Strabane, and Chartiers responded with only a comment that the Applicant provide documentation of DEP's approval. Status: The Hydrologic and Hydraulic	The Hydrologic and Hydraulic Analysis, Floodplain Analysis Report for Chartiers Run and Westland Run Houston Injection Site has been revised to document no increase in the floodplain elevations for Chartiers Run and Westland Run. The revised H&H report is provided on the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

	Analysis, Floodplain Analysis Report for Chartiers Run and Westland Run Houston Injection Site, Revision 1, prepared by Timothy Dunaway, P.E.-082840-E of Tetra Tech, Inc. dated provided for Chartiers Run indicates an increase in the floodplain elevation of 0.05-feet and for Westland Run indicates an increase in the floodplain elevation of 0.02-feet. Provide documentation that the proposed increases are on property owned or controlled by Sunoco Logistics, L.P., or the property owners have provided a flood easement for the areas affected by the increase in the 100-year flood elevation. Additionally, provide an Exhibit that identifies the location and limits of the affected properties.	
SWRO-Washington 1.b.	Provide the following certification, signed and sealed in the Hydrologic and Hydraulic Analysis: "I (name) do hereby certify pursuant to the penalties of 18 Pa.C.S.A. Sec. 4904 to the best of my knowledge, information and belief, that the information contained in the accompanying plans, specifications and reports has been prepared in accordance with accepted engineering practice, is true and correct, and is in conformance with Chapter 105 of the rules and regulations of the Department of Environmental Protection."	The revised PE certification for the Hydrologic and Hydraulic Analysis is provided in the document titled "*PPP 105 Atts 7, 13-16 REV Slipsheets – 020117"* and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SWRO-Washington 2.	The previous TDL stated, "ES-1.56 shows a PFO wetland to the east of Patterson Rd. This wetland is not shown elsewhere in the application. Revise your application to identify this resource, and provide all other necessary information related to this wetland and the proposed crossing.	The area is not a wetland and is a soil amendment area. The label was changed in the December 2016 submission to make this clearer.

	Additionally, the proposed HDD in this area appears to end in this wetland. Consider avoiding/minimizing your impacts to this wetland by reconfiguring the proposed HDD crossing." Your response stated that this area is not a wetland and was inadvertently identified as such during the sheet design. ES-1.56 still shows a PFO wetland at this location. Revise your application accordingly. 25 Pa. Code §105.13(e)(1)(x)	
SWRO-Washington 3.	Regarding HDD crossing HDD PA-WA-0103.0000-RD (S16, S250), your Inadvertent Return Assessment states, "The drill will cross 56 feet below Linden Creek Road, 41 feet below Linden Creek, and 25 feet below S250. The 20" drill will closely follow the existing ME1 12" pipeline drill, which had an inadvertent return." Regarding this statement: 25 Pa. Code §§105.301(10). The narrative refers to S16 as Linden Creek, when all other documents refer to S16 as Little Chartiers Creek. Please clarify which is correct and revise your application as necessary. Discuss the inadvertent return that occurred at this location during the installation of ME1. At a minimum, this discussion should include: • Why the inadvertent return occurred. • The depth of the ME1 pipeline at the resource crossings. • What impacts to aquatic resources occurred as a result of the IR.	The risk assessment and the HDD plan have been reviewed again by project engineers and geologists. The review has resulted in a HDD design change that further reduces the potential for an inadvertent return. The Linden Road/Little Chartiers Creek HDD will now be 20 feet deeper than the 12 inch pipeline. This revised HDD keeps both the vertical and horizontal radius at 2,000 feet which is better for stresses as well as head pressure. This does not result in a change to the project LOD. The revised risk assessment and HDD drawing for this crossing are posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

	• How the previous occurrence of an IR at this location was accounted for in the design of the proposed crossing. • Lower risk alternatives that were evaluated before the HDD crossing was chosen as the preferred alternative, and why those alternatives were not chosen.	
IV. Southcentral Regional Office – February 1, 2017 Technical Deficiency Letter		
SCRO-General 1.	Technical Deficiency from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **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
SCRO-General 1.a.	As outlined by the DEP in the September 6, 2016 letter, The Comprehensive Environmental Evaluation was presented as a broad, overarching discussion of the project and its potential direct, indirect and cumulative effects on Regulated waters of the Commonwealth. However, the details of the application do not support the broad points. Respond to the items listed below.	As presented throughout the Application, the Project will not result in the loss of any riparian areas as there will be no permanent conversion of vegetation to developed/non-vegetated areas within the riparian area of the streams crossed by the Project, and all temporary workspaces will be allowed to revert to their original cover, including forest and scrub-shrub vegetation. Specifically, all riparian areas disturbed during construction will be restored/revegetated in accordance with the Chapter 102 requirements and will

	In an effort to demonstrate the overall project consistency with State antidegradation requirements, the applicant provided an antidegradation analysis. Each county-specific application (Enclosures C&D) does not specifically discuss the secondary impacts to watercourses from the riparian loss related to antidegradation. Revise the Enclosures. One focus of this analysis is the reduction in temporary construction ROW at stream crossings from 75 feet to 50 feet, which the DEP recognizes as a good protective measure, and avoidance and minimization effort on Regulated waters of the Commonwealth. However, there many are instances, without justification, where temporary construction ROWs are up to 100 feet within 10 feet of the stream in HQ/EV watersheds. The Anti-degradation analysis states that some impacts will occur from forested riparian loss. Reduce the temporary construction ROW in HQ/EV watersheds (examples S-L4, S-Q67, S-J70, S-M35, S-B33, S-L31, S-L33, S-L39, S-L40, S-M6, S-M8, S-M7, S-M3, S-M2, S-M1, S-K95, S-K96, S-L21, S-J4, S-I87, and S-K50). Reforesting the temporary construction ROWs would further reduce the potential impacts to streams from riparian forest loss. The application does not provide a plan to replace the forested and scrub shrub riparian areas, nor does it provide an explanation of why it cannot be replaced. Provide a reforestation plan to offset potential adverse impacts.	be seeded with an herbaceous seed mix (meadow) to promote quick stabilization and establish erosion control. Review of the Water Quality Antidegradation Implementation Guidance (DEP 2003) indicates there are no specific requirements related to the identification of secondary and/or indirect impacts associated with antidegradation. However, as presented in SPLP's Antidegradation Analysis (Attachment 11, Enclosure E, Part 5), the Project will protect and maintain the existing/designated stream uses and water quality of the HQ streams and EV streams/wetlands that are temporarily impacted by construction and no secondary impacts to these resources, associated with antidegradation, are anticipated. A detailed review and discussion of potential secondary impacts to the stream and wetland resources crossed by the Project is provided in Section 4.0 of the Resource Identification and Project Impacts report (Attachment 11, Enclosure E, Part 2). Per Chapter 105, there are no regulated buffers associated with wetland and stream resources in the Commonwealth of Pennsylvania. The 105 regulations require that the Project comply with the antidegradation requirements contained in Chapters 93, 95, and 102 (105.14b(11)). As presented in the Project's Antidegradation Analysis (Attachment 11, Enclosure E, Part 5), the Project complies with these regulations and will not alter the existing/designated stream uses of any of the water resources crossed and will protect and

		maintain the water quality of all HQ/EV resources, including EV wetlands, affected by the Project. In addition, the Project has requested a waiver regarding riparian buffers under 102.14(d)(2)(ii) for linear projects, including pipelines, and has provided the justification for such waiver in the Chapter 102 Site Restoration and PCSM Report. As presented in the Project's Resource Identification and Project Impacts (Attachment 11, Enclosure E, Part 2), to avoid and minimize vegetation clearing and habitat fragmentation, SPLP has co-located the alignment of the pipeline with existing SPLP owned and operated ROWs to the maximum extent practicable. When co-location (abut and overlap) with existing SPLP ROWs was not feasible or practicable, routing was co-located (abut) with other utility corridors to maximum extent practicable: over 80 percent of the Project ROW length is co-located with existing utility line ROWs. In addition, SPLP has also implemented a number of avoidance, minimization, and mitigation measures for wetland and stream resources located in the Project area. Specifically, SPLP has further reduced the width of the construction ROW to 50 feet across all streams and wetlands starting 10 feet landward of the streambanks; limited the land disturbance to the excavated trench line and minor grading of the at the travel lane crossing, as required; planned to leave roots/stumps, to the extent possible, so that the roots stabilize the soils (minimize erosion) and re-establishment of native vegetation is facilitated; implemented the trenchless (i.e., conventional bore and

		HDD) crossing methods where practicable, and identified the dry construction method for all other stream crossings; required the use of timber mats when working in and travelling through wetlands to minimize soil compaction and mixing to promote natural revegetation; and, implemented erosion and sediment control measures for all land disturbances in accordance with DEP's Erosion and Sediment Pollution Control Program Manual (DEP 2012) including incorporating ABACT BMPs to further reduce potential impacts to HQ/EV resources crossed by the Project. In uplands, SPLP has limited the construction workspace to 75 feet in width, inclusive of a minimal 50-foot-wide permanent ROW and a 25-foot-wide temporary construction ROW, to the extent practicable. However, there are some areas where additional temporary workspace and spoil space is required to ensure safe construction practices and to avoid impacts to sensitive resources (i.e., conventional bore staging areas). SPLP has sited these additional temporary workspaces to avoid impacts to stream/wetland resources and residential areas (landowner requests) while maintaining a safe and efficient work area for installation of the pipelines. The different types of workspaces are defined within the Project Description provided as Attachment 9. In response to DEP's comment, SPLP has reviewed the temporary workspaces located in riparian zones and has not identified any further opportunities to reduce these workspaces.

		In some locations, the Project requires clearing of overhanging vegetation along streams at a discrete crossing location (i.e., 50-foot-wide permanent ROW). SPLP believes that the incremental widening of an existing ROW or creation of a new ROW will not result in a detectable thermal change. As previously stated, a number of the riparian areas associated with the streams crossed are wetland areas that will be restored to their pre-construction vegetation, except for a minor area of forested wetland (0.405 acre). As a result of the proposed dry stream crossing measures, limiting clearing to the minimum width practicable, and restoring and revegetating the streambanks and buffering wetland areas, SPLP believes secondary impacts as a result of clearing vegetated riparian buffers will be non-detectable and insignificant. In response to DEP's comment and concerns regarding riparian area impacts, SPLP will restore the temporary workspaces of the 150 foot riparian buffers of HQ/EV watershed streams and 100 feet of CWF streams to their pre-existing condition.
SCRO-General 1.e.	There are locations within many of the counties where the source of a stream is being impacted through an open-cut trench installation method. Insufficient information has been provided for the DEP to definitively state that no adverse impact will occur. Revise the application to fully examine the potential for or present a Compensatory Stream Mitigation plan.	As noted by DEP, in some locations an open cut trench installation is proposed at or above the beginning of a stream channel, and potentially in a wetland, groundwater, or groundwater seep source of a stream. To assure restoration of the source of a stream, open cut trench installation will be implemented using stream crossing BMPs in accordance with the DEP E&S Manual as outlined within each of the counties E&S Plans, and the Impact Avoidance, Minimization and Mitigation Procedures document provided in

		Attachment 11, Enclosure E, Part 4 of the December 2016 application revision. In addition to these BMPs, a licensed Professional Geologist will be present on each spread during pipeline construction and restoration, will evaluate each wetland that is found to have a potential confining layer during trenching, will be consulted in regard to encounters with groundwater resources and seeps during trenching, and will advise and ensure proper soil layer restoration during subsurface soil backfilling. With the implementation of these BMPs, no adverse impacts to wetlands, streams, or stream sources will occur.
SCRO-General 1.f.	Part 2 of Enclosure E, Section 3.8.4 Hydrology, provides an across the board statement that the project will have "no more than minimal adverse impact on wetland hydrology". Contrary to other parts of application (example Enclosure E, Part 2 Resource ID, Section 3.8.1) it is documented that outside of wetland vegetation conversion, no permanent wetland impacts are proposed. In accordance with 25 Pa Code §§105.18a the Department will not grant a permit for water obstructions and encroachments which have an adverse impact on Exceptional Value wetlands. Based on the information provided, the DEP is not able to evaluate impacts on Exceptional Value or other wetlands as required by 25 Pa Code *§105.18a.* Provide a discussion and supporting documentation which wetland resources will incur adverse impacts to hydrology and how the hydrology will be changed *[25 Pa. Code*	In order to minimize impacts to wetlands that depend on a restrictive layer for hydrology, SPLP has evaluated the potential for all wetlands, including exceptional value and other 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. The

	§105.18a(a)(1), 105.18a(b), 105.15(a), 105.14(b)(4)] along with responses to specific questions related to information on Exceptional Value and other wetlands.	PG will also provide technical expertise and oversight when karst openings or groundwater seeps are encountered during trenching activities, and also when the presence of groundwater seeps and drains are encountered within wetland areas. These measures, 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 of wetlands is maintained post-construction. Based on the minimization and mitigation measures that will be implemented to address wetland impacts, the Project will result in no permanent or adverse impacts on wetland (inclusive of exceptional value and other wetland) hydrology. Section 3.8.4 of the Resource Identification and Project Impacts Report provided in Attachment 11, Enclosure E, Part 2, has been revised to state that the project will have "no permanent or adverse impact on hydrology" to be consistent with other parts of the application, and the revision of this document is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SCRO-General 1.g.	Each county-specific permit application contains an Alternatives Analysis and Impact Analysis in the form of Enclosures C&D of the Environmental Assessment. Each Alternatives Analysis is written in more general terms, discussing overall efforts to avoid and minimize potential impacts to Regulated waters of the Commonwealth including 4 major route deviations, 12 minor realignments, and an	SPLP's response is detailed within a document titled "*Response to DEP 01-27-17 105 Comments No 4 and 5"* and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

	evaluation of type of crossing method. This information is sufficient for the project-wide Alternatives Analysis overall, yet there are outstanding questions on localized alternatives that could further avoid and minimize impacts to Regulated waters of the Commonwealth, which lends towards the cumulative project impacts. Address all the items listed in the Alternatives Analysis section of each county-specific letter.	
SCRO-General 1.h.	Furthermore, the DEP acknowledges Enclosure F of each application contains a Compensatory Wetland Mitigation plan. However, there are outstanding deficiencies with the Wetland Compensation plan. Address the deficiencies in the Mitigation portion of the County-specific technical deficiency letters.	The Project's Compensatory Mitigation Plan document (Attachment 11, Enclosure F) has been revised to address DEP's comments and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SCRO-General 2	Number skipped in letter.	NA
SCRO-General 3	Technical Deficiency 10 from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **Provide a detail that shows how flumes or other in-stream supports are used for temporary stream crossings as mentioned in the Temporary Stream Crossing detail and identify where each method will be used. [*25 Pa. Code §§105.13(g)*]** The response states that the contractor may choose from several crossing method options. For each crossing, there should be a selected method best suited for the stream conditions. Revise the documents to clearly show the chosen method for each crossing location. Additionally, no details of	All temporary road crossings of streams will be constructed to generally meet the terms and conditions of DEP's Bureau of Waterways Engineering and Wetlands General Permit – 8 for Temporary Road Crossings.

	the proposed instream temporary bridge supports have been provided. Revise the application to include these details and information.	
SCRO-General 4.	Technical Deficiency from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **The site plan sheets and E&S plan sheets identify the floodway which appears to be measured from the centerline of the stream as opposed to measuring from the top of bank for the 50-feet assumed floodway boundary. Provide floodway boundaries on all plan drawings that adhere to the definitions in Chapter 105 by providing the FEMA mapped floodway boundary, in areas absent a FEMA mapped floodway, the floodway boundary measured 50 feet landward from the top of bank, or in areas absent a FEMA mapped floodway a floodway boundary with evidence provided that the assumed 50 feet floodway is not accurate. [*25 Pa. Code §§105.13(e)(1)(i)(A), 105.1*]** The response indicates that the field data forms are estimates of resource dimensions and that the values listed in Table 3 of Tab 11 are accurate; however, there are instances where the bank to bank width will change by greater than 10 feet. Examples include S-Q6, S-K48, S-J70, S-J60, S-A14, S-A16, S-A25, S-A28, S-B83, S-L28, S-L29, S-Y1, S-K94, S-A16, S-M78, S-K74, S-J34, S-Q89, and S-J61. Revise the application to accurately identify the floodways.	To ensure the correct delineation of the assumed floodway, SPLP has undertaken the re-evaluation of all watercourses where there is no FEMA designated floodway to ensure that the floodway is properly identified. Aerial photographs, field photographs, previous application submissions, field investigations (if necessary), and quality checks against the survey grade data, have been performed. SPLP has had every stream's assumed floodway checked for accuracy against the field forms, delineation photographs, aerial photographs, and site-specific survey, including those listed within the comment. The locations and revisions of the floodway have been summarized and revised on the 102 E&S and 105 site plans and new calculations provided within revised impact tables. Those plan and table revisions will be provided to PADEP on the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

SCRO-General 5.	Technical Deficiency from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **Identify the proposed provisions for shut-off in the event of break or rupture for each crossing. Provide locations and description of how this action will be completed in the event a break or rupture occurs. *[25 Pa. Code § 105.301(9)]*** The response indicates that block valves will be placed at streams wider than 100 feet and at an interval of no greater than 10 miles, and states that the valve locations are located on the plan sheets. However, no block valves are shown on the plans for large streams in Perry, Lancaster, or Cumberland (Conodoguinet Creek). What provisions for shut off in the event of a break or rupture has Sunoco planned for these areas?	The locations of block valves are listed within the Project Description (Attachment 9) and are depicted on the aerial plan sheets (Attachment 7) and the E&S Plan sheets (Attachment 12). Although in many cases block valves are located adjacent to streams, locations of block valves are not necessarily located immediately adjacent to streams wider than 100 feet, and may be located at the nearest road access point or other feature to optimize timely and reliable access in the event of a pipeline break or rupture. In Perry County, no water is crossed that is wider than 100 feet, however the Doylesburg block valve is located in this county. In Lancaster County, no water is crossed that is wider than 100 feet, however the Blainsport block valve is located in this county. Within Cumberland County, Conodoguinet Creek is wider than 100 feet and the Creek Road block valve is provided just to the west of Creek Road adjacent to the river and the Wolf Bridge Road EFRD is 0.73 miles to east of the river. Yellow Breeches Creek is a maximum of 100 feet wide and is protected by the Arcona Road Valve – 1.88 miles to the west and the Old York Road block valve – 3.82 miles to the east. As identified and described in the Project Description (Attachment 9, Section 3.10), the block valves themselves offer the provisions for shut-off in the event of a pipeline break or rupture.
General Plan and Impact Table		
SCRO-General 6.	Technical Deficiency from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **The site specific drawings reference "Stream Restoration" but no detail or plan for this stream restoration has**	The E&S Plan details and notes section have been revised to include a stream restoration detail, which includes stream bed restoration measures. A steep bank restoration detail has also been added to the E&S Plan details and notes section. All of the revised E&S Plans

	been provided. Provide a plan for the stream restoration referenced in the site specific drawings. In addition, clarify if this will be utilized at additional stream crossings or not and identify the crossings where it will be utilized. [*25 Pa. Code §§105.13(e)(1)(i)(G), 105.13(e)(1)(i)(C), 105.311(2), 105.15(a)*] The DEP acknowledges the general stream restoration plan on ES Sheet ES-0.09; however, the detail is not specific regarding where the detail is to be applied. This restoration technique may not be appropriate for streams with steep banks. For example, streams S-B82, S-J59, S-C3, S-C102, S-K80, S-Y22, S-Q65 and S-K48. In addition, the detail does not show the restoration of the stream bed. Revise the drawings, as appropriate. See PTC example provided.	containing these revised notes and details are provided for every county on the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SCRO-General 7.	Technical Deficiency from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **The plans indicate that Streams S-K51, S-K52, S-Q64, S-Q67, S-J63, S-J62, a portion of S-J70, and S-J69 flow in and along and under the ROW and proposed pipelines and not across and immediately through them or start/end in the area of excavation for the pipes. The plan provided for S-Q67 in Tab 7D does not adequately depict the existing or proposed conditions upon stream restoration or excavation limits. The E&S plans do not provide sufficient detail on the stream limits,**	Tab 7D title sheets for the indicated counties have been revised and are titled "*Tab 7D Revisions 020417*" provided on the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

	banks, excavation limits etc. Provide site-specific plans, cross sections, and profiles that adequately depict the existing and proposed conditions, stream bed, stream banks, limits of excavation, and methods for the stream restorations. ***[25 Pa. Code §§105.13(e)(1)(i)(C), 105.13(e)(1)(i)(G)]*** The DEP acknowledges the response; however, Attachment 7, Tab 7D indicates that standard drawings apply and there are no site specific cross sections for this county. This is contrary to other parts of the application where site specific drawings are included; for example, the Erosion and Sedimentation Control Plans. Revise Tab 7D for consistency. This is applicable to Perry, Juniata, Blair, Huntington, Cumberland, Lebanon.	
SCRO-General 8.	Technical Deficiency from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **Provide site specific cross sections for the streams and wetlands which depict the existing and proposed conditions of the streams and wetlands, proposed pipes and depths, and the existing stream bed and banks dimensions.** ***[25 Pa. Code §§105.13(e)(1)(i)(G), 105.14(b)(4), 105.301(3), 105.301(4), 105.301(5)]*** The DEP acknowledges that typical details have been provided; however, no indication of which resource each typical detail may apply nor were specific dimensions located. Provide site specific	The stream and wetland crossing typicals are based on approved methods obtained directly from the DEP E&S Manual. Crossing methods may vary based on the flow observed at the time of the crossing, and the E&S Plan notes and sequencing provide the conditions for when a particular method can be used, such as the requirement of no flow during a "dry crossing." The project's impact tables provide the top of bank to top of bank width, centerline crossing length, and flow regime. Stream profiles are provided in the site-specific drawings for the larger and more complex crossings within the E&S Plans provided in Attachment 12 and basic plan and profiles for all other streams provided in Attachment 7, Tab 7G. All stream profiles within Attachment 7, Tab 7G have a note to "see E&S Plans

	cross sections for each resource or revise the typical details to identify the resources in which the detail applies and the specific information for each resource. If the typical details will be used, the resource identification and pertinent dimensions can be included in tabular form on the plans. In addition, the site specific cross sections do not show the trench plugs in the profile view. Revise the plans to accurately show the subsurface features. This deficiency also applies to Juniata, Blair, Huntingdon, Cumberland, Lebanon, and Lancaster.	for all crossing conditions, notes, details, and methods." All site-specific drawings located within the E&S Plans provide notes to "Reference E&S Plan and site restoration notes and details for additional construction sequencing, typical details and notes." The use of these notes will reference the additional notes and details that require installation of trench plugs.
SCRO-General 9.	Technical Deficiency from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **Revise the stream Bank Restoration Detail to clearly indicate that the existing bank slope and grade and elevation are to be restored, to identify a biodegradable erosion control blanket to be utilized, and to specify the native plantings to be used. In addition, some stream banks are likely to be a-typical, like vertical banks, or very low banks, or eroding banks. Provide plans and details for how banks of a-typical conditions will be restored.** ***[25 Pa. Code §§105.13(e)(1)(i)(G), 105.13(e)(1)(ix), 105.1, 105.13(e)(1)(x), 105.15(a)(1), 105.14(b)(4), 105.16(d)]*** In addition to the details not being site specific, the atypical situations were not addressed. The response indicates that the non-typical situations will be addressed in the field. The expectation of	Additional typicals have been added to county E&S Plans to account for a variety of a-typical situations. Revised E&S Plan section providing the additional details are provided on the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

	the DEP is that each resource was field viewed and the appropriate crossing method and restoration method is able to be selected by the design engineer. Revise the plans to provide site specific information. This applies to all Counties.	
SCRO-General 10.	Technical Deficiency from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **Provide plans or a detail for the restoration of stream beds at open cut stream crossings. This should include replacement of native stream bed material and assurance that no significant changes in bed grade occur.** ***[25 Pa. Code §§105.13(e)(1)(i)(G), 105.13(e)(1)(ix), 105.1, 105.13(e)(1)(x), 105.15(a)(1), 105.14(b)(4), 105.16(d)]*** The response indicates that a sheer stress analysis was performed to determine if the native stream bed material is suitable to restore the stream; however, the analysis was not located. Provide the sheer stress analysis. Also, revise the site specific plans and cross sections to indicate the placement of native stream bed material over the proposed rip-rap. This applies to all Counties.	The sheer stress analysis is now included with the revised typical drawings. The typical rip rap detail has been revised to show the depression of the rip-rap in the streambed, and restoration using the natural streambed material overtop of the rip-rap and the following note added to the drawing "Natural streambed material is to be restored throughout and overtop the rip-rap where feasible". The application E&S Plan sheets will be updated with the revised detail. The revised sections of the E&S Plans will be posted to the SharePoint site located here by the end of the day February 6, 2017: **MEII DEP Agency Documentation SharePoint Site**
SCRO-General 10.a.	In addition, the site specific plans depict riprap outside of the trench excavation widths (identified as 4-5 feet on the plans). Clarify why this replacement of stream bed material is necessary if it is not being otherwise excavated and avoid these additional impacts if practicable. This applies to all Counties.	The rip rap proposed is the worst-case scenario and a result of the requirement to provide appropriate restoration and bank protection for all resources within the LOD. Given the reduced workspace available at stream crossings, disturbance of the entire bank may be required for safe installation of the pipeline. Regardless, effort will be made to reduce the areal extent of bank disturbance, and ultimately rip rap will

		only be placed where disturbance has occurred. The Project's Environmental Inspectors will ensure any reductions in disturbance and associated use of rip rap are thoroughly documented, justified, and approved.
SCRO-General 11.	Technical Deficiency from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **Revise the application to clarify if the exceptional value wetland analysis included all factors listed in 25 Pa Code §105.17(1). If the analysis did not consider all factors, revise it to analyze all factors and update the application.** ***[25 Pa. Code §§105.13(e)(1)(x)(B), 105.17(1)]*** Revise the analysis to evaluate wetlands for Exceptional Value classification in regards to additional water supplies identified while addressing the additional deficiencies. This applies to all Counties.	As presented in the Resource Identification and Project Impacts Report provided in Attachment 11, Enclosure E, Part 2, exceptional value (EV) SPLP's wetland analysis includes all factors listed in 25 Pa Code §105.17(1). No additional wetlands are classified as EV due to the additional water supply areas identified.
Environmental Assessment		
SCRO-EA 12	Technical Deficiency from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **Enclosure C of the Environmental Assessment discusses the various sections in terms relative to the existing pipeline ROW; however, the proposed ROW does not fully overlap the existing ROW but abuts/parallels the existing ROW. Revise Enclosure C to discuss the functions, habitat, and other factors in Enclosure C outside of the existing ROW and in areas of proposed impact**	The Alternatives Analysis (Attachment 11, Enclosure E, Part 3; Section 3.3) identifies the major locations where co-location of the proposed pipeline with existing SPLP ROWs was not practicable, clearly explains and provides justification that co-location was not feasible or practicable, and presents four Major Route Alternatives that were considered feasible or practicable and adopted in these locations. In Perry, Lancaster, and Lebanon counties, the Alternatives Analysis (Section 5.0) clearly explains the measures taken to further avoid and minimize harm to

	and the overall resources. ***[25 Pa. Code §§105.13(e)(1)(x), 105.15(a), 105.14(b)(4)]*** The response indicates that the pipeline will be co-located "where possible". In areas where co-location is not proposed, clearly explain why this is the case. Technical Deficiency 93 from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. This applies to Perry, Lancaster, and Lebanon.	wetlands and waterbodies to the maximum extent practicable, including but not limited to the consideration and adoption of Minor Route Variations. Minor Route Variations were considered and adopted in Perry (three), Lancaster (one), and Lebanon (one) counties, as presented in the Alternatives Analysis (Table 3) to avoid significant impacts to other (non-wetland) resources and/or to further avoid or minimize impacts on wetland and waterbodies. Table 3 also presents the location, length, crossing method, Crossing Area, significant resource impact avoided, and wetland (acres) and waterbody (linear feet) impact reduction achieved at each Minor Route Variation.
SCRO-EA 13.	Public water supplies are located within in the vicinity of the proposed pipeline. The application states that there will not be any impacts to the water supplies as a result of the pipeline. Provide the supporting documentation that led to this conclusion. Locate the public drinking water supplies in the vicinity of the proposed pipeline. Additionally, we recommend that you contact any public water supplier in order to help determine if your project will impact the public water supplier and subsequently provide documentation of interactions, through correspondence, with each supplier. Ensure all Public water supplies in the vicinity of the proposed pipeline are identified within the location map. Enclosed are instructions on how to utilize DEP's eMapPA to identify public water supplies in the vicinity of your project. [25 Pa. Code §§105.13(e)(1)(ii) & 105.13(e)(1)(x) & 105.14(b)(5)]	The project's Water Supply Preparedness, Prevention, and Contingency Plan (Attachment 12; Tab 12B) has been updated to include all newly identified water supplies. The correspondences with each supply owner/operator has also been updated. No additional wetlands are classified as EV due to the additional water supply areas identified. The updated plan has been revised and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site** Some specific well locations are not available to SPLP. SPLP has reached out to all of the identified public water suppliers listed within the revised Water Supply plan and have requested that they provide the location of the well or intake, as well as to provide an opportunity to express any concerns they may have with the proposed project. When higher risk situations or concerns have been raised, such as the case with

	a. Upon identification of public drinking water supplies, revise the Environmental Assessment Form and associated enclosures accordingly to discuss the resources and impacts from water obstructions and encroachments on the public water supplies. [25 Pa. Code §§105.15(a), Environmental Assessment Form Instructions] **b.** Upon identification of public drinking water supplies, revise the Alternatives Analysis and Mitigation Plan accordingly to avoid and minimize impacts to public water supplies and provide a detailed discussion on alternative routes, designs and methods documenting that there is no practicable alternative to further avoid and minimize impacts. [25 Pa. Code §§105.13(e)(1)(viii), 105.13(e)(1)(ix), 105.14(b)(5)] Public water supplies have now been identified, however most of this deficiency remains. An impact analysis of the proposed water obstruction and encroachments on the public water supplies identified is needed. If any impacts are identified, appropriate avoidance, minimization, and mitigation must be identified. Revise the application to address the deficiency for all public drinking water supply areas. Verify if any additional wetlands are classified as EV due to the water supply areas being identified. This applies to all Counties.	Aqua PA, SPLP has consulted with the company in regard to well locations, depths, and PPC activities. In accordance with §105.18a(a)(3) and §105.18a(b)(3), the Alternatives Analysis (Attachment 11, Enclosure E, Part 3) has been prepared to address practicable alternatives to avoid and minimize impacts to EV and other wetlands.

SCRO-EA 14.	Technical Deficiency from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **Revise Enclosures C & D to discuss the watercourses and wetlands proposed to be impacted and the impacts on them, and not discuss the impacts in general terms of the overall project or general type of impacts.** ***[25 Pa. Code §§105.13(e)(1)(x), §105.15(a)]*** The revised enclosures do not discuss each resource on an individual basis and remain general in nature. This applies to all Counties.	Attachment 11 and Enclosures C and D combined present detailed, watercourse- and wetland-specific descriptions and characterizations, as well as present specifics in regards to the impacts to these resources. Specifically, the impact tables present a list of each watercourse and wetland located within the proposed construction workspace. For each individual watercourse, the impact tables present the Stream Identification Code, Stream Name, Location Coordinates, Flow Regime, Bank to Bank Width (feet), Length of Centerline Stream Crossing at HDD/Bore, Stream Disturbance Length in ROW (feet), Crossing Method, Stream Permanent Impact (square feet), Stream Temporary Impact (square feet), DEP Permanent Floodway Impact (acre), DEP Temporary Floodway Disturbance (acre), Ch. 93 Designated Use, PAFBC Stream Designation, Site Plan/E&S Plan/HDD Plan Sheet Number, Permit, USACE District, USACE Section 10/404 Activity, and Fee Crossing Reference Number. For each individual wetland, the impact tables present the Wetland Identification Code, Cowardin Classification, Location Coordinates, 12-Digit HUC Code, Crossing Method, Length of Centerline Crossing (feet), DEP Permanent Impact, DEP Temporary Impact, Conversion Impact, Exceptional Value, Plan/E&S Plan/HDD Sheet Number, Permit, USACE District, USACE Section 10/404 Activity, Fee Crossing Reference Number.

		In addition, Enclosures C & D present narratives that define and describe the existing resources as well as the nature and extent of potential impacts to each classification of watercourse (HQ/EV, CWF, and non-classified) and wetland (PEM, PSS, and PFO) presented in the impact tables. Enclosure D has been expanded to identify the temporary and permanent impacts to all the EV wetlands crossed, and includes an assessment of their designation as EV wetlands and any potential impacts to that designation In response to DEP's comments, theses narratives have been revised to provide additional information on EV wetlands, and to confirm no adverse impacts to EV wetlands, and no significant adverse impacts on other wetlands. The revised Enclosures C and D will be posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SCRO-EA 15	Technical Deficiency from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **Section B.2.a of Enclosure D of the Environmental Assessment states the natural drainage patterns of the wetlands and small or headwater streams will be maintained. However, no information has been provided or detailed contours or cross sections depicting the drainage patterns, cross section, or what the drainage patterns are in the wetlands in the existing conditions. Explain**	Due to the often ephemeral nature of these types of areas, SPLP will collect baseline survey data (e.g., pre-construction photographs) at these types of resources prior to construction. Adherence to the construction and restoration procedures of the E&S plan along with SPLP's environmental compliance program as detailed within the Impact Avoidance, Minimization, and Mitigation Procedures document provided as Attachment 11, Enclosure E, Part 4 will ensure these types of resources are properly restored.

	how the final "restored" wetland elevations and natural drainage patters of wetlands and streams will be determined. ***[25 Pa. Code §§105.13(e)(1)(x), 105.14(b)(4), 105.14(b)(11), 105.15(a), 105.18a(a), 105.18a(b)]*** Only typical details have been provided, and the response states that the two foot contours on the E&S plans will be utilized for restoration. Many streams are about 2 feet wide and less than two feet deep, for example S-A83, S-A81, S-A79, S-B83, S-K83, W-K63, S-L52, S-M18, S-L8, S-L9, S-Q70, S-L5, S-L4, S-L3, S-K54, S-K49, S-J73, S-J69, and S-J70. Insufficient detail is present for contractors to ensure that restoration of existing conditions will occur. Clarify how two foot contours are sufficient for determining post construction elevations and provide site specific plans of sufficient detail to demonstrate that natural drainage patterns will be maintained. Examples include, but are not limited to streams which are not proposed to be crossed at a 90 degree angle, streams whose sources are proposed to be excavated, and wetlands.	
SCRO-EA 16	Technical Deficiency from DEP's Technical Deficiency Letter, dated September 6, 2016, has not been adequately addressed. **Revise Enclosure D of the Environmental Assessment to explain, on an individual crossing and cumulative basis, why open cut pipe installation combined with permanent ROW maintenance will not result in an adverse impact to exceptional value wetlands**	Enclosure C has been expanded to identify the EV wetland resources and the reason for their designation as EV for each county. In addition, Enclosure D has been expanded to identify the temporary and permanent impacts to all the EV wetlands crossed, and includes an assessment of their designation as EV wetlands and any potential impacts

	or a significant adverse impact to other wetlands. The analysis should include a discussion of potential temporary or permanent impacts to hydrology as a result of the open cut, as well as a loss of woody species in forested/scrub shrub areas. Provide a plan to minimize the risk of permanent impacts to wetland hydrology for each wetland where an impact may occur. [*25 PA Code §§105.13(e)(1)(ix) & 105.18a*] The discussion offered is general and non-specific to the EV resources. Provide a site specific analysis for the EV resources demonstrating that no adverse impacts will result from the project. This applies to all Counties.	to that designation (per the PADEP meeting on February 2, 2017). Permanent impacts to forested/scrub-shrub areas and hydrology are also presented for the EV wetlands within each county. Section 3.8.2 of the Resource Identification and Project Impacts Report provided in Attachment 11, Enclosure E, Part 2, has also been revised to include this more detailed analysis of potential impacts to EV wetlands. The revised Enclosures C and D, and Resource Identification and Project Impact Report will be posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**
SCRO 17.	The following comments pertain to the Compensatory Wetland mitigation plan, proposed in Cumberland County. Note that these comments apply to all applications which require compensatory mitigation for forested to emergent wetland conversation: a. Confirm that a bog turtle habitat screening was performed and that a US Fish and Wildlife Service clearance is provided for the proposed wetland plantings. b. Confirm that PNDI clearances provided by the resource agencies account for the proposed work at the mitigation site. c. The proposed mitigation site is in close	The Project's Compensatory Mitigation Plan document (Attachment 11, Enclosure F) has been revised to address DEP's comments and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

	proximity to the pipeline ROW. Measures need to be implemented to ensure the perpetual protection of the mitigation site. The plan indicates that a conservation instrument will be used for long-term protection but no instrument language is provided. Provide a copy of the deed restriction or conservation easement (with approval by a holder) for the mitigation site. d. The mitigation plan states that PFO wetlands improve sediment/toxicant retention and nutrient removal. However, the Environmental Assessment within the application states that PEM wetlands improve sediment/toxicant retention and nutrient removal. Clarify the discrepancy and ensure uniform functional assessment across the application. e. The selected mitigation site is identified as currently having several functions and values. Provide an explanation for why this site was chosen as opposed to wetlands which are in need of functional uplift and explain how this adequately compensates for the lost functions and values from the proposed impacts. f. The Compensatory Wetland Mitigation should be constructed prior to or concurrent with impacts, not after. Revise the Compensatory Mitigation Plan accordingly.	

	g. Provide justification on why this site was selected, why compensatory mitigation cannot be completed in the watersheds where impacts are proposed, and how it compensates for impacts outside of the watersheds. h. Provide a demonstration to show that the proposed plantings will not negatively affect the current functions and values of the wetlands. Given the numerous functions provided by the existing wetland, provide an evaluation of potential functional loss expected from the proposed plantings. Aerial imagery provided do not appear to support that the wetland was forested since at least 1938. Explain why converting the PEM to PFO is appropriate in this area.	
SCRO 18.	The Alternatives Analysis for site specific resources in all of the SCRO counties evaluates alternatives which states that the alternative route may avoid resources but does not investigate what resources it may avoid and states that these resources are outside the corridor. Altering the proposed ROW to the opposite side of the 8-inch ROW has not been evaluated at most locations. In many locations no additional forest fragmentation will occur or no additional that that already proposed. Revise all of these alternatives analyses to document with reliable and convincing evidence	SPLP's response is detailed within a document titled "*Response to DEP 01-27-17 105 Comments No 4 and 5"* and is posted to the SharePoint site located here: **MEII DEP Agency Documentation SharePoint Site**

	that no practicable alternatives exist to further avoid and minimize impacts or revise the application to avoid and minimize these impacts. [105.14(b)(7), 105.18a]	
SCRO-EA 19.a and b	**Revise Enclosures C&D to assess the condition and discuss the condition of and impacts to forested and scrub shrub riparian areas. Revise the enclosures to discuss the primary impacts and secondary impacts, as well as consideration of antidegradation on watercourses for each watercourse crossing from the riparian vegetation impacts.** ***[25 Pa. Code §§105.15(a), 105.13(E)(1)(x), 105.14(b)(4), 105.14(b)(11), 105.14(b)(12), 105.14(b)(14)]*** The Environmental Assessment does not discuss the current condition of these areas. The Environmental Assessment has been revised to identify that forested and scrub shrub areas will be affected and the measures taken to avoid and minimize impacts to them; however, it does not discuss the impacts to the watercourses in Huntingdon County from this riparian vegetation change. In addition, the Anti-degradation analysis states that some impacts will occur from forested riparian loss. Revise the enclosures to discuss the primary impacts and secondary impacts, as well as consideration of antidegradation on watercourses for each watercourse crossing from the riparian vegetation impacts. *[25 Pa. Code §§105.15(a), 105.13(E)(1)(x), 105.14(b)(4), 105.14(b)(11), 105.14(b)(12), 105.14(b)(14)]*	As presented throughout the Application, the Project will not result in the loss of any riparian areas as there will be no permanent conversion of vegetation to developed/non-vegetated areas within the riparian area of the streams crossed by the Project, and all temporary workspaces will be allowed to revert to their original cover, including forest and scrub-shrub vegetation. Specifically, all riparian areas disturbed during construction will be restored/revegetated in accordance with the Chapter 102 requirements and will be seeded with an herbaceous seed mix (meadow) to promote quick stabilization and establish erosion control. Review of the Water Quality Antidegradation Implementation Guidance (DEP 2003) indicates there are no specific requirements related to the identification of secondary and/or indirect impacts associated with antidegradation. However, as presented in SPLP's Antidegradation Analysis (Attachment 11, Enclosure E, Part 5), the Project will protect and maintain the existing/designated stream uses and water quality of the HQ streams and EV streams/wetlands that are temporarily impacted by construction and no secondary impacts to these resources, associated with antidegradation, are anticipated. A detailed review and discussion of potential secondary impacts to the stream and wetland resources crossed by the Project is

	The Department acknowledges the inclusion of the antidegradation analysis. The antidegradation analysis points out that temporary construction ROW is reduced from 75 feet to 50 feet at stream crossings, starting 10 feet landward from the streambanks. However, review of the application finds numerous areas where the temporary construction ROW is 95-100 feet wide (example. Stream S-B33). Revise the plans to reduce the temporary construction ROW to 75 feet, at minimum within HQ/EV watersheds, to be consistent with the antidegradation measures proposed. **a. In general, the Department recommends evaluating the riparian areas from the top of bank landward 100ft, and if the area utilized is less than 100ft justification should be given as to why. [25 Pa. Code §§105.15(a), 105.13(E)(1)(x), 105.14(b) (4), 105.14(b)(11), 105.14(b)(12),105.14(b)(14), Riparian Forest Buffer Guidance, Document # 394-5600-001]** A discussion regarding the existing riparian areas could not be located. The Environmental Assessment does not provide a plan to replace the forested and scrub shrub riparian areas, nor does it provide an explanation of why it cannot be replaced.	provided in Section 4.0 of the Resource Identification and Project Impacts report (Attachment 11, Enclosure E, Part 2). Per Chapter 105, there are no regulated buffers associated with wetland and stream resources in the Commonwealth of Pennsylvania. The 105 regulations require that the Project comply with the antidegradation requirements contained in Chapters 93, 95, and 102 (105.14b(11)). As presented in the Project's Antidegradation Analysis (Attachment 11, Enclosure E, Part 5), the Project complies with these regulations and will not alter the existing/designated stream uses of any of the water resources crossed and will protect and maintain the water quality of all HQ/EV resources, including EV wetlands, affected by the Project. In addition, the Project has requested a waiver regarding riparian buffers under 102.14(d)(2)(11) for linear projects, including pipelines, and has provided the justification for such waiver in the Chapter 102 Site Restoration and PCSM Report. As presented in the Project's Resource Identification and Project Impacts (Attachment 11, Enclosure E, Part 2), to avoid and minimize vegetation clearing and habitat fragmentation, SPLP has co-located the alignment of the pipeline with existing SPLP owned and operated ROWs to the maximum extent practicable. When co-location (abut and overlap) with existing SPLP ROWs was not feasible or practicable, routing was co-located (abut) with other utility corridors to maximum extent practicable: over 80

	Based on the application it appears that compensatory mitigation may be necessary to offset adverse impacts; however the Department is unable to currently review the impacts without the additional information. Upon review of the assessment of impacts, the Department may determine that compensatory mitigation is necessary to mitigate for the adverse impacts. [25 Pa. Code §§105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.15(a), 105.11(d), 105.13(e)(1)(ix)] **b. To avoid and minimize the impacts to the watercourses, provide a plan to replace the vegetation lost in both permanent and temporary ROW and workspaces. Alternatively, where it cannot be replaced and provided protection from clearing during the proposed project's operation and maintenance, provide an explanation as to why it cannot be replaced. [25 Pa. Code §§105.15(a), 105.13(E)(1)(x), 105.14(b)(4), 105.14(b)(11), 105.14(b)(12), 105.14(b)(14), 105.1, 105.14(b)(7)]** The Environmental Assessment does not provide a plan to replace the forested and scrub shrub riparian areas, nor does it provide an explanation of why it cannot be replaced.	percent of the Project ROW length is co-located with existing utility line ROWs. In addition, SPLP has also implemented a number of avoidance, minimization, and mitigation measures for wetland and stream resources located in the Project area. Specifically, SPLP has further reduced the width of the construction ROW to 50 feet across all streams and wetlands starting 10 feet landward of the streambanks; limited the land disturbance to the excavated trench line and minor grading of the at the travel lane crossing, as required; planned to leave roots/stumps, to the extent possible, so that the roots stabilize the soils (minimize erosion) and re-establishment of native vegetation is facilitated; implemented the trenchless (i.e., conventional bore and HDD) crossing methods where practicable, and identified the dry construction method for all other stream crossings; required the use of timber mats when working in and travelling through wetlands to minimize soil compaction and mixing to promote natural revegetation; and, implemented erosion and sediment control measures for all land disturbances in accordance with DEP's Erosion and Sediment Pollution Control Program Manual (DEP 2012) including incorporating ABACT BMPs to further reduce potential impacts to HQ/EV resources crossed by the Project. In uplands, SPLP has limited the construction workspace to 75 feet in width, inclusive of a minimal 50-foot-wide permanent ROW and a 25-foot-wide temporary construction ROW, to the extent practicable. However, there are some areas where additional temporary workspace and spoil space is

		required to ensure safe construction practices and to avoid impacts to sensitive resources (i.e., conventional bore staging areas). SPLP has sited these additional temporary workspaces to avoid impacts to stream/wetland resources and residential areas (landowner requests) while maintaining a safe and efficient work area for installation of the pipelines. The different types of workspaces are defined within the Project Description provided as Attachment 9. In response to DEP's comment, SPLP has reviewed the temporary workspaces located in riparian zones and has not identified any further opportunities to reduce these workspaces. In some locations, the Project requires clearing of overhanging vegetation along streams at a discrete crossing location (i.e., 50-foot-wide permanent ROW). SPLP believes that the incremental widening of an existing ROW or creation of a new ROW will not result in a detectable thermal change. As previously stated, a number of the riparian areas associated with the streams crossed are wetland areas that will be restored to their pre-construction vegetation, except for a minor area of forested wetland (0.405 acre). As a result of the proposed dry stream crossing measures, limiting clearing to the minimum width practicable, and restoring and revegetating the streambanks and buffering wetland areas, SPLP believes secondary impacts as a result of clearing vegetated riparian buffers will be non-detectable and insignificant.

		In response to DEP's comment and concerns regarding riparian area impacts, SPLP will restore the temporary workspaces of the 150 foot riparian buffers of HQ/EV watershed streams and 100 feet of CWF streams to their pre-existing condition.
SCRO-EA 19.c.	**Revise the application plan drawings and project description to clearly and specifically state if vegetation clearing, cutting, removal, or other alteration is proposed as part of the proposed projects' construction, operation, and maintenance. Revise the plan drawings to clearly indicate all locations where maintenance clearing, cutting, removal, or other alternation is not part of proposed maintenance activities.** ***[25 Pa. Code §§105.13(e)(1)(ix), 105.14(b)(4), 105.14(b)(12), 105.14(b)(13), 105.14(b)(14), 105.11(d)]*** The response states that shrubs will be planted in areas that are currently scrub shrub wetlands and further states that wetlands and streams will not be mowed in the future. Explain why these areas will not be mowed when the entire existing ROW is currently and explain how these areas will be demarcated so that the contractor knows their extent. Clarify if there will be any vegetative management along the permanent ROW.	As described in the Avoidance, Minimization, and Mitigation Procedures (the Procedures) document located in Attachment 11, Enclosure E, Part 4, all areas cleared of vegetation during construction that occur within the permanent ROW as presented the project plans will be maintained in an open meadow condition, with the exception of noted wetland restoration areas and/or landowner agreements. Operations and Maintenance has also committed to no mowing in wetlands to eliminate the potential for any long-term impact on these resources. During the February 2, 2017 meeting with PADEP, PADEP asked that we expand the no mowing to also include no hand cutting or herbicide application in wetlands. SPLP has updated the Procedures document accordingly. Within the referenced Avoidance, Minimization, and Mitigation Procedures document located in Attachment 11, Enclosure E, Part 4, the following is indicated in Section 9.3 as a procedure for the PFO and PSS restoration areas: "PSS and PFO restoration areas will be protected with "no-mow" signs or other restrictive barriers as determined by SPLP." All other wetlands will not receive signage, however ROW maintenance actions are closely supervised and the Operation's team will be fully notified of all operational restricted areas.

		The revised Procedures document is provided to PADEP on the SharePoint site located here by the end of the day February 6, 2017: **MEII DEP Agency Documentation SharePoint Site**

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

Sincerely,
Tetra Tech, Inc.

Sandra J. Lare
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