



PITT-11-16-036

December 2, 2016

Project Number 112IC05958

Mr. Christopher Smith, P.E.
Chief, Construction Permits Section
Waterways and Wetlands
Pennsylvania Department of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, Pennsylvania 19401-4915

Re: Pennsylvania Pipeline Project Permit No. ESG 0500015001
Construction Spread 6
Technical Deficiency Response

Dear Mr. Smith:

On behalf of our client, Sunoco Pipeline, L.P. (SPLP), Tetra Tech, Inc. provides the following responses to the Pennsylvania Department of Environmental Protection (DEP) Technical Deficiency Response letter dated September 6, 2016 regarding the above-referenced ESCGP-2 Permit Application. The supporting attachments represent a revision of the ESCGP-2 Application in response to the comments received and also incorporates revisions that have been made to the project design since the original submission.

For ease of your review, each DEP item is set forth bolded verbatim below, followed by an italicized narrative response.

Comments and Responses to September 6, 2016 Technical Deficiency Response

Page 2		
General Common Technical Deficiencies		
1.	DEP	The application will need a comprehensive Preparedness Prevention Contingency (PPC) and private well plan. Regarding these plans, 25 Pa. Code Section 102.5(l):
	a.	The application includes separate documents covering PPC activities. Due to the scope of this project, you must consolidate these plans into one stand-alone document that can be used in the field. This plan must also be consistent in your Joint Permit Applications submitted for this project.

	<p><i>SPLP Response:</i></p>	<p><i>The Preparedness, Prevention, and Contingency Plan (PPC Plan) has been updated to be applicable project-wide. The PPC Plan is designed to address spill prevention in general. Potential impacts to surface waters and public and private water supplies in particular have been analyzed and addressed within two supplemental plans to the PPC Plan: a Water Supply Assessment, Prevention, Preparedness, and Contingency Plan (Water Supply Plan); and an Inadvertent Return Assessment, Prevention, Preparedness, and Contingency Plan (IR Plan). The Water Supply Plan provides for the assessment of the existing public and private water supplies in or along the project, as well as identifies prevention and preparedness measures to be implemented to protect those supplies. The IR Plan outlines the preconstruction activities implemented to ensure sound geological features are included in the HDD profile, the measures to prevent impact, and the plan to be implemented if an impact were to occur. In addition, a Void Mitigation Plan for Karst Terrain and Underground Mining (Karst Plan) is provided as part of the E&S Plan and assesses the potential impacts and avoidance and mitigation measures during open-cut and drilling procedures. The purpose of these plans is to protect surface and groundwater resources project-wide.</i></p>
	<p>b.</p>	<p>In a letter dated June 24, 2016, regarding the northeastern bulrush, the U.S. Fish and Wildlife Service stated, "As a means to minimize impacts should an IR occur, you provided a Horizontal Directional Drilling (HDD) Inadvertent Release Contingency Plan. In addition to the instructions in this Plan, please add the USFWS phone number as an agency to be contacted should an IR occur, and inform the HDD contractor about the sensitive nature of the drill at this location." Revise your Contingency Plan to incorporate this information.</p>
	<p><i>SPLP Response:</i></p>	<p><i>A comprehensive and complete contact list (including USFWS phone number) has been added to the IR Plan provided in Tab 8. The HDD contractor will be informed of sensitive areas through the Environmental Inspection training program, which is discussed within the IR Plan.</i></p>
	<p>c.</p>	<p>While you provided a narrative discussing how impacts to private water supplies will be investigated and addressed, a formal plan has not been provided. As such, revise your PPC Plan to include the following:</p>
		<p>i. Measures the applicant will take to investigate for the presence of private water supplies in areas where HDD crossings are proposed.</p> <p>ii. Procedures that will be followed to investigate and resolve impacts to private water supplies should they occur as a result of the proposed activities. This procedure needs to discuss how private water supply owners will be alerted in the event of an inadvertent return.</p> <p>iii. The application states, "SPLP Plans to use the FERC standards in accepting and investigating landowner complaints of spring and well water supply impairment." Provide a copy of these FERC standards and incorporate the FERC standards into your PPC Plan.</p>

	<i>SPLP Response:</i>	<p><i>The measures SPLP will take to investigate for the presence of private water supplies in areas where HDD crossings are proposed are described within the Water Supply Plan. Those measures include review of data from Pennsylvania Department of Conservation and Natural Resources Pennsylvania Groundwater Information System, landowner consultations, and field verification of all private drinking water wells within 150 feet of HDD activity.</i></p> <p><i>The Water Supply Plan and IR Plan also include the procedures that will be followed to investigate and resolve impacts to private water supplies should they occur as a result of the proposed activities. These include owner/manager notification, the supply of clean drinking water, and water quality re-sampling. The Water Supply Plan and the IR Plan are provided in Tab 8.</i></p> <p><i>The PPC Plan has been revised to remove the reference to FERC standards.</i></p>
	d.	The Mariner East I pipeline had several inadvertent returns during the construction process. Provide a list of areas where Mariner East I had issues with inadvertent returns to the surface when conducting HDD crossings, and discuss how you have taken these historic issues into account in your design of the proposed project.
	<i>SPLP Response:</i>	<i>SPLP has developed a stand-alone Inadvertent Return Contingency Plan (Tab 8 of the ESCGP-2 permit application) that outlines the preconstruction and construction procedures for reducing the risk of inadvertent returns, as well as the procedures for inspecting, reporting, containing, and restoring discovered returns. This plan has taken into consideration lessons learned during ME1 and evaluation of the areas where inadvertent returns occurred during ME1. Additional geotechnical investigations were conducted as well as an independent review of the proposed drills.</i>
	e.	The Plan needs to address management of excess drilling mud/liquids that may be encountered at the individual bore pits.
	<i>SPLP Response:</i>	<i>The PPC Plan and the IR Plan were updated to include standard operating procedures pertaining to conventional bore drilling. These plans are provided under Tab 8 of the ESCGP-2 Permit Application. The typical detail in the E&S plan notes and details for HDD's addresses drilling muds and liquids.</i>
Page 3		
2.	DEP	Regarding your agency coordination:
	a.	Provide Pennsylvania Natural Diversity Inventory (PNDI) clearances from the PA Game Commission and U.S. Fish and Wildlife Service. [25 Pa. Code Section 102.6(a)(2)]
	<i>SPLP Response:</i>	<i>The PNDI Clearances from the PA Game Commission and the US Fish and Wildlife Service have been provided and can be found under Tab 6 of the ESCGP-2 Permit Application.</i>
	b.	Provide proof that you have received clearance for your project from Pennsylvania Historical and Museum Commission (PHMC).

	<i>SPLP Response:</i>	<p><i>While DEP is required to consider potential impacts to historic resources under 25 Pa. Code Chapter 105 when DEP conducts reviews of a water obstruction, encroachment or dam permit application, none of the regulations or guidance referenced in DEP’s comment require SPLP to provide clearance or approval from the PHMC as part of a Chapter 102 or Chapter 105 permit application. Furthermore, as noted in a letter from Alexandra C. Chiaruttini, Esq., DEP’s Chief Counsel concerning the SPLP Pennsylvania Pipeline Project, “the [Pennsylvania] History Code does not authorize our agency or any Commonwealth agency to stop the processing of permits solely due to possible or actual presence of archaeological or historic resources, unless the agency’s enabling legislation contains specific statutory authorization for such action. DEP does not have such authorization here.” A copy of the February 1, 2016, letter from Ms. Chiaruttini is provided in Attachment 6. See also Pennsylvania History Code §508(a)(4). Accordingly, SPLP requests that DEP continue its review of SPLP’s applications.</i></p> <p><i>SPLP will continue to work with the PHMC to ensure that impacts to cultural resources are avoided where possible. In addition, SPLP has included with its Chapter 102 application a Cultural Resources Unanticipated Discovery Plan (Tab 11) to be implemented during construction that outlines the protocols SPLP will follow if SPLP unexpectedly encounters archaeological or historic resources, including notification to DEP and PHMC and cessation of earth disturbance.</i></p>
3.	DEP	The project description provided in the Cultural Resource Notice states that the second pipeline is to be installed within 5 years of the first pipeline. The project description provided in the application, however, does not discuss this time frame. [25 Pa. Code Section 102.6]
	a.	Revise the application to discuss if the pipelines will be installed at the same time, or on different schedules.
	<i>SPLP Response:</i>	<i>Both pipelines will be installed within the same limit of disturbance so there would be no additional, temporary disturbance resulting from a second separate installation. For safety purposes, the installation would be staggered by what is estimated to be no more than 60 days. At some HDDs with longer drills, however, the time period between installation of the two pipelines may exceed 60 days. Any temporary stabilization required would be implemented in accordance with the Project’s E&S Plans.</i>
	b.	The application states that the second pipeline will be 16 inches in diameter, while other applications related to this project state that the second pipeline could be up to 20 inches in diameter. Which is correct?
	<i>SPLP Response:</i>	<i>In previous submissions and coordination documents, the diameter of the second pipeline had not yet been determined by engineering, but SPLP understood the maximum possible size would be 20 inches in diameter. SPLP has completed the initial engineering details for the necessary capacities of the second line and has determined that the second pipe will be 16 inches in diameter. The application has been revised to reference a 16-inch pipeline.</i>
	c.	If the pipelines are proposed to be installed at separate times, revise the application to clearly indicate this, and to identify the permanent and temporary impacts from the second pipeline installation. Please be advised that if issued the permit may expire before construction is completed on any second line.

	<i>SPLP Response:</i>	<i>The Project Description throughout the Application has been updated to reflect the timing of the installation of the 20-inch and the 16-inch pipeline. In general, the 20-inch pipeline would be installed first, followed by the 16-inch line. For a conventional lay, the pipelines would be installed within the same disturbance to the maximum extent practicable. For safety purposes, the installation would be staggered by what is estimated to be no more than 60 days. At some HDDs with longer drills, however, the time period between installation of the two pipelines may exceed 60 days. Any temporary stabilization required would be implemented in accordance with project's E&S Plans.</i>
4.	DEP	Your application identifies "travel lanes" at numerous resource crossings; however, details on these crossings have not been provided. Provide details on these travel lanes that includes, but is not limited to, cross sectional view, length of time in service, potential impacts, etc. Note that the application did not detail any impacts, permanent or temporary, or E&S Controls for these travel lanes even though they may constitute disturbance and are shown to cross resources. As such, your application may need to be revised. [25 Pa. Code Section 102.6]
	<i>SPLP Response:</i>	<i>"A section on ""Travel Lanes"" has been added to Section 3.4 of the E&S Narrative, and the E&S Plan Sheets have been revised to call out all ""Travel Lane"" areas, including which are ""travel only"" and which are ""travel and clearing only"". For ""Travel Lane"" areas that involve resources crossings, an equipment bridge/working platform crossing will be installed per the typical details provided in the E&S Plan Sheets. These equipment bridges/working platforms have also been added, where required on the main E&S Plan Sheets.</i> <i>Cross-sectional views of these resource crossings have not been developed because travel is anticipated to occur on existing grade with no grading required. The intent of clearing a ""travel and clearing only"" ""Travel Lane"" would be to provide adequate clearance for equipment to access the work area and protect the resources crossed within that travel lane.</i> <i>Use of these ""Travel Lanes"" will be intermittent throughout the whole life of the project with a brief period of increased use during HDD activities and other construction activities in the immediate area. Impacts for ""Travel Lanes"" designated as ""travel only"" will be temporary, while impacts for ""Travel Lanes"" designated as ""travel and clearing only"" areas will have permanent impact associated with tree and brush removal."</i>
5.	DEP	We have compared the Plans submitted with this application and the Plans submitted with the Joint Permit Applications regarding consistency between the site plans and E&S Control Plans you have provided. Inconsistencies were noted as follows: [25 Pa. Code Section 102.6]
	a.	Describe the difference between the "Permanent Easement" and "Permanent Right-of-Way" areas that are identified on your plans. This description needs to discuss maintenance activities that will be performed on these areas following construction of the pipeline, and measures that will be taken to ensure that future maintenance activities do not detrimentally impact aquatic resources (i.e., cutting PSS wetlands after restoration).

	<p><i>SPLP Response:</i></p>	<p><i>“Permanent Easement” refers to the legal document that gives rise to a right of way. The “Permanent Easement” is legally protected from encroachment by the landowner. The “Permanent Easement” designation on the plans has no relevance to the maintenance activities that will occur.</i></p> <p><i>“Permanent Right-of-Way” is the term used in the plans to designate the area where future maintenance activities will occur. The maintenance activity in the Permanent Right-of-Way will vary depending on the type of Right-of-Way (e.g., Permanent Right-of-Way, ROW-Travel LOD, ROW-Travel, Station-LOD, or Block Valve Setting-LOD). These designations are described in the Project Description in Attachment 9 of the Chapter 105 Application and the Permanent ROW is shown on the E&S Plan Drawings. The Minimization, Avoidance, and Mitigation Procedures, provided in Attachment 11, Enclosure E, Part 4 of the Chapter 105 Application discusses maintenance activities that will be performed in the Permanent Right-of-Way areas following construction of the pipeline as well as measures that will be taken to ensure that future maintenance activities do not detrimentally impact aquatic resources. For example, the plan indicates that “No Mowing” signs will be placed in PSS areas that will be restored within the Permanent Right-of Way. These areas will also be inspected for continued presence of signage as part of SPLP’s maintenance activities.</i></p>
<p>Page 4</p>		
	<p>b.</p>	<p>Provide a description of the "Travel Lane" that is shown on your project plans. This description needs to include:</p> <ul style="list-style-type: none"> i. The purpose of these features. ii. Whether these features will be temporary or permanent. iii. The crossing methods (i.e., mats, pads) that will be used to cross resources.
	<p><i>SPLP Response:</i></p>	<p><i>"Travel Lanes" are portions of the project LOD that will be used for travel between HDD workspaces. Some of these lanes will require mechanical clearing of trees and brush to improve travel conditions and/or line-of-sight for HDD activities. No other construction activities will occur in these areas. A section on "Travel Lanes" has been added to Section 3.4 of the E&S Narrative, and the E&S Plan Sheets have been revised to call out "Travel Lane" areas, including those which are "travel only" (no mechanical clearing required) and those which are "travel and clearing only" (mechanical clearing required).</i></p> <p><i>Use of these "Travel Lanes" will be intermittent throughout the duration of the project with a brief period of increased use during HDD activities and other construction activities in the immediate area. Impacts for "Travel Lanes" designated as "travel only" will be temporary, while impacts for "Travel Lanes" designated as "travel and clearing only" areas will have permanent impact associated with tree and brush removal.</i></p> <p><i>The LOD for "Travel Lanes" designated as “travel and clearing only” do not cross wetlands and most floodplains and floodways. For any portions of the "Travel Lanes" that are crossing resources, an equipment bridge/working platform crossing will be installed consistent with the descriptions provided in the E&S Plan Sheets. These equipment bridges/working platforms have also been added, where required on the main E&S Plan Sheets.</i></p>
	<p>c.</p>	<p>The plan views provided do not show a permanent right-of-way proposed over areas where HDD installation is proposed. Describe any clearing or maintenance activities that are proposed to occur over areas where your pipeline installation will utilize HDD/bore methods to install the line.</p>

	<i>SPLP Response:</i>	<i>Vegetation clearing, grubbing, or removal within the permanent ROW is not anticipated to occur as part of the pipelines construction to be installed via an HDD or bore except in the areas within the LOD, which is depicted in the plan drawings. However, in instances where the LOD extends into wetlands, floodplains, and floodways, no maintenance clearing, cutting, removal, or other alteration will occur. Instead, alternative methods of inspections (e.g., foot patrol) will be employed to maintain the pipeline ROW in wetlands, floodplains, and floodways.</i>
	d.	The E&S Plan sheets show the proposed gas line being located on top of an existing gas line. Discuss how this will be achieved without preventing access to the existing line.
	<i>SPLP Response:</i>	<i>There are locations where the Project lines (16" and 20") share the ROW with another Sunoco 8" line, and in some cases, the Project line will cross the Sunoco 8" line. The new lines are still expected to be installed underneath the existing line. If for some reason, the Project lines must cross over top of the Sunoco 8" line while still maintaining the minimum necessary cover, SPLP will be able to stop flow through any line, as necessary, to facilitate safe access to their crossed line.</i>
	e.	It is recommended that changes to either the JPA or the E&S application be reflected in the other application. Failure to ensure consistency between the two applications will delay any permit decision for this project.
	<i>SPLP Response:</i>	<i>SPLP has undertaken efforts to ensure that all changes to either the JPA or the ESCGP-2 Applications are consistent between the two applications.</i>
6.	DEP	In order to ensure adherence to Threatened and Endangered species restrictions/avoidance measures that are part of any PNDI clearances, the Plans and drawings need to clearly identify these locations and provide construction notes and seasonal restrictions. Both the plans for this application (ESG0500015001) and the plans for the Joint Permit Applications will need to be revised to include this information. [25 Pa. Code Section 102.6(a)(2)]
	<i>SPLP Response:</i>	<i>A "Rare, Threatened, and Endangered Species Restrictions and Avoidance Measures" table has been added to the plans and the drawings.</i>
7.	DEP	The time of concentration line(s) do not appear to follow the contouring on the PCSM Plan drawings. The time of concentration lines need to be drawn perpendicular to the respective existing and proposed contours. Justify or amend the plan drawings and calculations accordingly. [25 Pa. Code Sections 102.8(g), 102.8(f)(8), 102.8(f)(9), 102.8(g)(3), and 102.8(g)(4)]
	<i>SPLP Response:</i>	<i>The time of concentration lines have been amended to be shown perpendicular to the respective existing and proposed contours and are reflected on the PCSM plan drawings.</i>
8.	DEP	The time of concentration line lengths on the drawings do not appear to match up with the time of concentrations calculations. Verify and amend accordingly. [25 Pa. Code Sections 102.8(g), 102.8(f)(8), 102.8(f)(9), 102.8(g)(3), and 102.8(g)(4)]

	<i>SPLP Response:</i>	<i>The time of concentration line lengths on the PCSM drawings have been amended to match the time of concentration calculations in Attachment 4 of the PCSM report.</i>
Page 5		
9.	DEP	It is difficult to follow how the additional time of concentration is calculated at the bottom of DEP Worksheet 5 (found in Spread 6 Volume IV). This calculation needs to show every step (i.e. detailed computations) of the calculation for the additional time of concentration for each modeled storm event (for 2, 10, 50, and 100-year storms). [25 Pa Code Section 102.8(g), 25 Pa Code Section 102.8(f)(8), 25 Pa Code Section 102.8(f)(9), 25 Pa Code Section 102.8(g)(3), & 25 Pa Code Section 102.8(g)(4).]
	<i>SPLP Response:</i>	<i>Detailed calculations for the Time of Concentration Adjustment method have been provided for each site within Attachment 4 calculations for each site. Additionally, the adjustment calculations have been revised to only utilize the storage volume for the storm event rather than the total possible storage of the BMP.</i>
10.	DEP	For DEP Worksheets 1-5 and the ESCGP-2 application, amend the following [DEP Application and Worksheets] for all above-ground structures (i.e. control valve locations and compressor/pump stations): [25 Pa. Code Section 102.6]
	a.	Include all causes of impairment for each respective receiving watercourse
	<i>SPLP Response:</i>	<i>The causes of impairment for each respective receiving watercourse have been added to Worksheet 1.</i>
	b.	Verify the receiving watercourse for each valve site's point of interest
	<i>SPLP Response:</i>	<i>The receiving watercourse for each point of interest has been verified and revised, where necessary on Worksheet 1.</i>
	c.	Verify the approval status of the Act 167 Plan for the watershed of each valve site. Provide verification that the site addresses the Act 167 Plan requirements
	<i>SPLP Response:</i>	<i>The approval status of the Act 167 Plan for the watershed at each valve site has been verified and revised on Worksheet 1, where necessary. Verification that the site addresses the Act 167 Plan requirements, when applicable, is detailed in the Act 167 Consistency Verification Reports, located in Tab 5 of the ESCGP-2 Permit Application.</i>
	d.	Verify the Chapter 93 classification for each respective receiving watercourse
	<i>SPLP Response:</i>	<i>The Chapter 93 designation of each respective receiving watercourse has been verified and revised, where necessary on Worksheet 1.</i>
	e.	Verify the 2-year/24-hour runoff volume to each berm based on the berm's drainage area
	<i>SPLP Response:</i>	<i>The 2 year/ 24- hour runoff volume to each PCSM BMP is provided for the "Post Detained" hydrograph in the Hydrograph Summary Report provided with each set of PCSM rate calculations.</i>

	f.	Verify the total structure volume provided on DEP Worksheet 5. This should be the lowest value between the drainage area runoff volume, the storage volume of the berm, and the infiltrated volume within 72 hours after the 2-year/24-hour storm event.
	<i>SPLP Response:</i>	<i>The total structural volume provided on DEP Worksheet 5 has been revised so that it is the lowest value amongst (i) the drainage area runoff volume, (ii) the storage volume of the berm and (iii) the infiltrated volume within 72 hours after the 2-year/24-hour storm event.</i>
	g.	Verify the recommended infiltration rate for each valve site with the calculations and the infiltration test data.
	<i>SPLP Response:</i>	<i>The recommended infiltration rates for each valve site have been revised based on new field data and relocating PCSM BMPs. The recommended infiltration rates are summarized in Attachment 5 of the Site Restoration and Post-Construction Stormwater Management Plan.</i>
11.	DEP	In order to be able to utilize PCSM Standard Worksheet No. 10, 90 percent of the disturbed area has to be controlled/managed by a PCSM BMP (refer to Flow Chart D in Chapter 8 of the PCSM Manual). Provide the demonstration that 90 percent of the disturbed area at each site (individually) is controlled/managed by a PCSM BMP (e.g., it appears that less than 90 percent of the disturbed area is being controlled/managed by a PCSM BMP at the Juniata River West Block Valve site). If less than 90 percent of the disturbed area is being controlled/managed by a PCSM BMP, then water quality management can be shown through PCSM Standard Worksheet Nos. 12 and 13 (for TSS, TP, and NO3). Make all revisions necessary. [25 Pa. Code Sections 102.8(f)(6), 102.8(f)(8), 102.8(g)(2), 102.8(g)(4), and 102.11(a)(2)]
	<i>SPLP Response:</i>	<i>A write-up has been generated to accompany the PCSM calculation for each block valve sites. The write-up provides evidence that 90% of the disturbed area is now controlled and managed by a PCSM BMP at each of the sites. As a result, Worksheets 12 and 13 are not needed.</i>
Page 6		
12.	DEP	Provide the calculations for each Time of Concentration Adjustment. Ensure that these calculations identify the storage volume utilized and how that storage volume was calculated. The storage volume used in these calculations is the storage volume utilized for the storm event, not the total possible storage of the BMP. Make all revisions necessary. [25 Pa. Code Sections 102.8(g), 102.8(f)(8), 102.8(f)(9), 102.8(g)(3), and 102.8(g)(4)]
	<i>SPLP Response:</i>	<i>Detailed calculations for the Time of Concentration Adjustment method have been provided for each site. Additionally, the adjustment calculations have been revised to only utilize the storage volume for the storm event rather than the total possible storage of the BMP. The calculation is provided in Attachment 4.</i>

13.	DEP	Provide discussion as to why HDD or conventional boring was not utilized to cross all surface waters classified as High Quality (HQ) or Exceptional Value (EV) in Chapter 93, as boring could be considered an ABACT E&S BMP (refer to page 290 of the E&S Manual). [25 Pa. Code Sections 102.4(b)(5)(vi), 102.4(b)(6), and 102.11(a)(1)]
	SPLP Response:	<i>The Alternatives Analysis included within the Chapter 105 applications demonstrate that the proposed pipeline route has been designed to maximize the use of existing utility corridors, and minimize the number and linear footage of crossings of all surface waters, including those classified as High Quality (HQ) or Exceptional Value (EV). The Trenchless Construction Feasibility Study sets forth an analysis of the possible implementation of trenchless construction methods at each stream or wetland crossing, and indicates the use of trenchless crossing installation methods where feasible. For those surface water crossings crossed by the open cut installation method, the E&S Plan identifies and incorporates ABACT E&S best management practices (BMPs).</i>
14.	DEP	Provide discussion on what E&S BMPs will be utilized at the HDD and conventional boring locations for the drilling mud. Ensure that these BMPs are properly shown on the plan view drawings. [25 Pa. Code Sections 102.4(b)(5)(iii), 102.4(b)(5)(vi), and 102.4(b)(5)(ix)]
	SPLP Response:	<i>Drilling mud will be stored in tanks or pits and therefore the management of drilling mud is not expected to have any impact on erosion or sedimentation. No drilling mud is anticipated to be used at conventional bores. Stormwater will be managed through E&S BMPs that are shown on the E&S plans.</i>
15.	DEP	Section E.1: Provide a better identification of which areas of the project were designed to meet which design standards (i.e. which areas were designed to the standards in an approved Act 167 Plan and which areas were designed to the standards of 25 Pa. Code Sections 102.8(g)(2) and 102.8(g)(3)). [25 Pa. Code Section 102.6(a)(1)]
	SPLP Response:	<i>The Act 167 verification reports, Act 167 tracking tables, and Site Restoration narrative have been updated to verify consistency with Act 167 or defined where the designs meet the standards of 25 Pa Code §§ 102.8(g)(2) and 102.8(g)(3)). The PCSM design calculations in Attachment 4 also summarize the design criteria utilized for the proposed aboveground facilities.</i>

16.	DEP	<p>Section F.1: Provide a better identification of which areas of the project were designed to meet which design standards (i.e., which areas were designed to the standards in an approved Act 167 Plan and which areas were designed to the standards of 25 Pa. Code [Sections 102.8(g)(2) and 102.8(g)(3)]</p> <p>If an area is covered by an approved and current (approved by DEP on or after January 2005) Act 167 Plan, the Post Construction Stormwater Management Plan shall be consistent with any approved and current Act 167 Plan. To demonstrate consistency with an approved and current Act 167 Plan, the applicant may select one of the following options (per Erosion and Sediment Control General Permit for Earth Disturbance Associated with Oil and Gas Exploration, Production, Processing, or Treatment Operations or Transmission Facilities Condition 18.b):</p> <ul style="list-style-type: none"> • Submit a letter provided by the municipal or county planning engineer that verifies plan constancy. • Submit an Act 167 Plan consistency verification report, which is prepared and sealed by a licensed professional. <p>Make all revisions necessary. [25 Pa. Code Section 102.6(a)(1)]</p>
	SPLP Response:	<p><i>The Act 167 verification reports, Act 167 tracking tables, and Post Construction Stormwater Management narrative have been updated to verify consistency with Act 167 or defined where the designs meet the standards of 25 Pa Code §§ 102.8(g)(2) and 102.8(g)(3)). The PCSM design calculations in Attachment 4 also summarize the design criteria utilized for the proposed aboveground facilities.</i></p>
<p>Page 7</p>		
<p>General Comments from Chester and Delaware County Conservation Districts</p>		
1.		<p>The E&S Legend is utilizing the same symbols for Silt fence and silt sock. The Legend needs to be updated to clearly distinguish between different perimeter BMPs. Also show the maximum allowable length on the plan. [25 Pa. Code Section 102.11(a)(1)]</p>
	SPLP Response:	<p><i>The legend has been revised to indicate the proposed use of compost filter sock. Silt fence is an approved alternative in non HQ/EV watersheds and the detail along with allowable lengths is provided on the E&S notes and details.</i></p>
2.		<p>The project illustrates substantially long sections of pipeline labeled as "To be Bored." Identify the type of trenchless installation being utilized at various locations such as HDD, traditional boring, directional boring, etc. [25 Pa. Code Section 102.11(a)(1)]</p>
	SPLP Response:	<p><i>The type of trenchless installation being utilized is reflected by the symbols used at each crossing on the E&S plan drawings. The legend on ES-0.01 provides clarity on the symbols.</i></p>

3.		<p>HDD installations typically require pull back areas, these are areas where the pipe that is to be pulled through the HDD hole is fabricated and prepared to be pulled through the hole. These pull back areas are typically straight off the HDD drill line. Identify all pull back areas for all proposed drilling operations. These pull back areas need to be clearly labeled and within the Limit of Disturbance with complete E&S controls proposed as they will be graded and disturbed as needed to allow for pipe delivery, fabrication and preparation and an access lane for all those activities. [25 Pa. Code Section 102.11(a)(1)]</p>
	<p><i>SPLP Response:</i></p>	<p><i>Pull back areas are labeled where ATWS was added for pull back. The pipeline ROW will also be used for pull back.</i></p>
4.		<p>If additional pull back areas are needed to be added, all the ESCGP-2 paperwork, disturbed acreage fees and District Service Fees need to be updated to cover the additional disturbances. [25 Pa. Code Section 102.11(a)(1)]</p>
	<p><i>SPLP Response:</i></p>	<p><i>All ESCGP-2 paperwork, disturbed acreage fees and District Service Fees have been updated as necessary and are located in Preface 1 of the ESCGP-2 Permit Application.</i></p>
5.		<p>Illustrate and title the entrance and exit pit locations for all bores and HDD's. For HDD's, illustrate the drilling mud collection containers. Note that this can be field adjusted within the approved LOD when needed. If specifically illustrating this information isn't possible, provide typical details for the entrance and exit pit locations for each trenchless installation method being proposed. [25 Pa. Code Section 102.11(a)(1)]</p>
	<p><i>SPLP Response:</i></p>	<p><i>Typical illustrations and layouts for HDDs and conventional bores have been added to the plans on Sheet ES-0.16 and ES0.17. Layouts will be adjusted, as needed in response to field constraints. Entry and exit designation are not provided so as to provide flexibility for the contractor to drill either direction as conditions may warrant.</i></p>
6.		<p>The plans need to address how the site contractor is to respond to Inadvertent Returns during drilling activities. Add notes to the plans and cross reference any documents or plans that Sunoco uses for these events. [25 Pa. Code Section 102.11(a)(1)]</p>
	<p><i>SPLP Response:</i></p>	<p><i>Notes have been added to the plans to address how the site contractor will respond to Inadvertent Returns under the Construction Sequence for HDD crossings on E&S Sheet ES-0.04, HDD sequence Note 3. A reference to SPLPs IR Plan (Tab 8) has also been added to the Construction Sequence for HDD crossings.</i></p>
7.		<p>The Site Restoration Note on sheet ES-0.02 states the right of way will be restored back to Meadow. Revise this note as the entire right of way will not be restored back to meadow condition. [25 Pa. Code Section 102.11(01) and (2)]</p>
	<p><i>SPLP Response:</i></p>	<p><i>The Site Restoration statement is now located at Sheet ES-0.20 now states, "As a result of applying soil amendment or infiltration berm, the entire right-of-way will be restored back to a meadow or lawn condition. There will be no increase in stormwater runoff rates or volume."</i></p>

8.		The sequence does not provide procedures for reclaiming or restoring the pullback areas. Include these procedures in the sequence.
	SPLP Response:	<i>Construction Sequence #17 was revised to state, "Any area that used stone and/or timber mats for temporary stabilization and/or access will be completely removed, soil will be decompacted by using tracked equipment. Make multiple passes over the area to reestablish preconstruction contours, and replace topsoil to match preexisting conditions. Seed and mulch areas. Vehicular traffic should be restricted from these areas to prevent soil compaction."</i>
9.		Update Standard Erosion and Sediment Control Plan Note No. 16 on sheet ES-0.06 to read "Sediment tracked onto any public roadway or sidewalk shall be returned to the construction site at the end of each work day, or as needed, or as directed by the Conservation District or Local Municipality, and disposed in the manner described in this plan. In no case shall the sediment be washed, shoveled, or swept into any roadside ditch, storm sewer or surface water." [25 Pa. Code Section 102.4(c)]
	SPLP Response:	<i>Standard Erosion and Sediment Control Plan Note #17 (previously #16) has been revised to read, "Sediment tracked onto any public roadway or sidewalk shall be returned to the construction site at the end of each work day, or as needed, or as directed by the Conservation District or Local Municipality, and disposed in the manner described in this plan. In no case shall the sediment be washed, shoveled, or swept into any roadside ditch, storm sewer or surface water."</i>
Page 8		
10.		Waterbar discharges need to go to sumped areas and then to filter socks. Update construction details to fully illustrate this. [25 Pa. Code Section 102.11(a)(1)]
	SPLP Response:	<i>Standard Figure 13.1, Waterbar Installation on a Utility Line Right-of-way from the PADEP E&S Pollution Control Plan Manual, has been added to the waterbar detail (ES-0.05), which depicts the outlet to a well vegetated area with a possible sediment barrier down-slope, if needed. The sediment barrier will be a row of CFS.</i>
11.		Typical Wetland Crossing - Design Detail Sheet E&S 0.09 Stockpiles need to occur outside of the wetland area.
	SPLP Response:	<i>Wetland topsoils and subsoils are kept within the wetland boundaries to maintain soil properties to the greatest extent practical. Only wetland soils are stockpiled in these boundaries. All upland soil stockpiles are kept a minimum of 10-feet from the wetland. This segregation practice makes wetland restoration easier and more effective than moving the soils a distance out of the wetlands. A new wetland crossing detail was developed and is presented on ES-0.15. A wetland restoration detail is also provided on ES-0.09 that provides additional information also.</i>
12.		Stream Wetland Bore crossing - Design Detail Sheet E&S 0.10 - Trench plugs shown within the area to be bored. Shouldn't it be in the area of the bore and receiving pit?

	<i>SPLP Response:</i>	<i>A new wetland crossing detail was developed and is presented on ES-0.15. A typical boring detail has also been developed and is provided on ES-0.17. Trench plugs are not to be shown within the area to be bored but rather at the limits of the resource.</i>
13.		Typical Stream Crossing
	a.	Dry by-pass - Pump Filter Bag Discharge and the clean water discharge needs to be below the LOD.
	<i>SPLP Response:</i>	<i>All filter bags will be placed in a well vegetated (stabilized) area per the DEP standard detail identified as Detail 11. The Dry Bypass detail has been revised as is included on Sheet ES-0.11.</i>
	b.	Sand Bags need to be below Equipment Bridge or working platform which will also be disturbed.
	<i>SPLP Response:</i>	<i>The sandbags have been moved below the Equipment Bridge in the typical stream crossing detail found on ES-0.11.</i>
	c.	Stabilization of disturbed stream banks and areas within 50' or 100'; depending on stream classification, need to be addressed.
	<i>SPLP Response:</i>	<i>The plan drawings have been updated to address erosion control blanket placement 50-feet from all streams and 100-feet from all HQ or EV streams and wetlands.</i>
	d.	Provide a blow up of each specific stream and wetland crossing that clearly illustrates all the E&S controls. The table provided does not appear to match the number and type of crossings at each location.
	<i>SPLP Response:</i>	<i>Site specific and typical details with appropriate E&S BMPs have been included for stream and wetland crossings. The details can be found in each County E&S Plan set in Attachment 2 of the E&S Report (Tab 3). Any discrepancies between the drawings and the BMP table have been addressed.</i>
14.		Perimeter E&S Controls need to be designed for the maximum slope length during construction. This includes both disturbed drainage slopes and undisturbed slopes. Address. [25 Pa Code Section 102.11(a)(1)]
	<i>SPLP Response:</i>	<i>The design of the perimeter E&S Controls have been reevaluated for the maximum slope lengths and sock size adjusted accordingly to comply with the E&SPCP Manual. Worksheet #1 has been updated to reflect this revision and can be found in Attachment 4 of the E&S Report (Tab 3 of the ESCGP-2 Permit Application).</i>
15.		Diversions need to be provided across all Rock Construction Entrances that are sloped towards roadways to divert storm water flows off the entrance and into perimeter controls. Update plans and details accordingly. [25 Pa Code Section 102.11(a)(1)]
	<i>SPLP Response:</i>	<i>Diversions will be provided for all Rock Construction Entrances that are sloped toward roadways. The water will be diverted with a water deflector. The general detail for the water deflector is included in the drawing sets, ES-0.08, and the plan location of the deflector is shown on the plan sheets.</i>

16.		In areas where pipeline construction is running slide sloping down hills, the top soil cut lip on the low end of the Right of Way will channel water down to the lowest point. The plans need to fully address this channelized flow of water at the bottom of hills with adequate E&S controls. For examples, see between stations 14377+00 to 14394+00 & 14440+00 to 14444+00. The designer needs to consider the following when evaluating and designing for this condition: that waterbars are not typically functional until final grades are established; the location of topsoil placement; trenching activities; and contractor access lanes on the ROW. Check the rest of the plans for similar situations and address. [25 Pa Code Section 102.11(a)(1)]
	<i>SPLP Response:</i>	<i>The design of the perimeter E&S Controls have been reevaluated for the maximum slope lengths and sock size adjusted accordingly to comply with the E&SPCP Manual. Worksheet #1 has been updated to reflect this revision and can be found in Attachment 4 of the E&S Report (Tab 3 of the ESCGP-2 Permit Application).</i>
Page 9		
17.		For steep slopes running down to stream crossings and/or roadways, additional E&S protection needs to be provided at or near the bottom of the slopes. For example see station 14525+00. Please check rest of plans for similar concern. [25 Pa Code Section 102.11(a)(1)]
	<i>SPLP Response:</i>	<i>E&S protection was re-evaluated along the pipe route and updated as necessary.</i>
18.		Super Silt Fence needs to be used in non-HQ and EV watersheds and 24" Filter socks need to be utilized in HQ and EV watersheds for construction activities adjacent to streams and wetlands. Revise the plans accordingly. [25 Pa Code Section 102.4(c)]
	<i>SPLP Response:</i>	<i>Super silt fence is not proposed for the project but is available to the contractor as an option in non HQ/EV watersheds. Compost filter sock is proposed on the plan drawings and the corresponding Worksheet #1 has been completed.</i>
19.		Illustrate specific E&S controls for each stream crossing. [25 Pa Code Section 102.11(a)(1)]
	<i>SPLP Response:</i>	<i>The typical crossing details are relevant and applicable to each typical resource crossing, and will be implemented at each crossing without the need to specifically depict such typical details on the plan views of the E&S Plan drawings. In several cases, site-specific drawings have been created and are referenced within the E&S Plan sheets and provided after the standard sheeting. These sites-specifics also reference the typicals which provide a consistent location for the same information. The site specific details can be found at the end of each County E&S Plan set in Attachment 2 of the E&S Report (Tab 3).</i>
20.		Provide a blow up of each specific stream and wetland crossing that clearly illustrates all the E&S Controls. [25 Pa Code Section 102.11(a)(1)]

	<i>SPLP Response:</i>	<i>The typical crossing details are relevant and applicable to each typical resource crossing, and will be implemented at each crossing without the need to specifically depict such typical details on the plan views of the E&S Plan drawings. In several cases, site-specific drawings have been created and are referenced within the E&S Plan sheets and provided after the standard sheeting. These sites-specifics also reference the typicals which provide a consistent location for the same information. The site specific details can be found at the end of each County E&S Plan set in Attachment 2 of the E&S Report (Tab 3).</i>
21.		The proposed access roads are detailed as an aggregate stone road. This usually requires the removal of top soil. Illustrate the top soil storage areas for each access lane. [25 Pa Code Section 102.11(a)(1)]
	<i>SPLP Response:</i>	<i>The proposed access roads are anticipated to be maintained on existing grade except as noted on the plan drawings at block valve or pump station locations. The proposed access roads at the above ground facilities are permanent and the top soil removed for the construction of the access road will be used at other topsoil locations within the project area.</i>
22.		Provide additional contour labeling on both sides of the ROW so that drainage directions can be more readily/ easily interpreted. [25 Pa Code Section 102.11(a)(1)]
	<i>SPLP Response:</i>	<i>Additional contour labeling has been added to both sides of the ROW on the E&S Plan Sheets.</i>
23.		E&S Controls need to be provided through wetland crossings to help reduce the amount of site construction related sediment from discharging to undisturbed areas of the wetland crossings. For an example, see WL-C49. Check the rest of the plans for similar situations and address. [25 Pa Code Section 102.11(a)(1)]
	<i>SPLP Response:</i>	<i>Temporary timber mats and compost filter socks have been added across all wetland crossings throughout the length of the project.</i>
24.		There are areas of pipeline "to be bored" that are shown within the LOD, but the extent of need for the disturbance is not identified. See from Stations 15045+00 to 15053+00 and 15054+00 to 15065+00 for example. Identify the type/ need of earth disturbance in these areas, check the rest of the plans for this issue and address. [25 Pa Code Section 102.11(a)(1)]
	<i>SPLP Response:</i>	<i>The extent of the need for disturbance has been clarified on the plan drawings to indicate travel or travel and clearing across HDD bore areas.</i>
25.		All large staging areas need to have a full E&S Plan developed including proposed activities, top soil stockpiles, perimeter controls or sediment traps and basins depending on total drainage areas flow to different parts of the staging areas. See staging area on sheets ES-6.56 and ES-6.51 for examples. Check the rest of the plans for similar issues and address. [25 Pa Code Section 102.11(a)(1)]
	<i>SPLP Response:</i>	<i>E&S controls have been updated for large staging areas.</i>

Page 10		
26.		The provided restoration plan that is coupled with the E&S Control Plan does not specifically or clearly cover full restoration requirements for the entire area of disturbance along the Right of Way. The CCCD recommends that each plan map sheet be updated with the required restoration standards for each section of pipeline disturbance. Existing lawn areas need to be specified to be returned to lawn, cleared wooded areas need to be restored to brushy meadow or similar within the ROW, outside of the ROW in Temporary Workspaces re-wooded, Ag land restored to Ag land, etc. All individual seed mixes required need to be included in the details and notes sections of the plans and the plan mapping can reference back to those mixes. [25 Pa Code Section 102.11(01) and (2)] Plan sheets that are just dedicated to Site Restoration requirements and the plan mapping can easily reference back to those sheets for detail.
	<i>SPLP Response:</i>	<i>Restoration notes and details are provided within the E&S and SR plan notes and details to be utilized to restore the pipeline corridor and temporary workspaces. The Site Restoration Plan is combined with the E&S plan drawings.</i>
27.		The site restoration plan for vegetated areas needs to clearly address removal of stone and/or wooden mats where they were used, de-compacting disturbed soils, reestablishment of preconstruction contours and the replacement of topsoil at a minimum of 4 inches deep. [25 Pa Code Section 102.11(a)(1)&(2)]
	<i>SPLP Response:</i>	<i>The restoration of vegetated areas has been addressed in Site Restoration Practices, Section 3.7, of the Site Restoration Plan.</i>
28.		Construction Engineering Oversight of the installation of structural BMPs is required. The plan notes and Construction Sequencing need to be updated to address this requirement. Infiltration Berms and Geoweb installations need to be included in these inspections along with any other structural PCSM BMPs. [25 Pa Code Section 102.11(a)(2)]
	<i>SPLP Response:</i>	<i>A licensed professional or designee shall be present on site for the oversight of critical stages for implementation of PCSM BMPs. Construction of infiltration berms will be inspected during and immediately upon completion of construction by the licensed professional or designee. geoweb is not proposed as a structural PCSM BMP for the block valve sites, so construction oversight will not be required. Deviations from the approved PCSM plans may be necessary, however, the appropriate county conservation district or the dep must approve any deviation to the authorized plans.</i>
29.		The last step of the Sequence of Construction needs to include the submission of a completed Notice of Termination. Address. [25 Pa Code Section 102.11(a)(1)]
	<i>SPLP Response:</i>	<i>Construction Sequence #20 was added and states, "In accordance with 25 pa code 102.7, upon completion of all construction activities, a notice of termination form will be submitted to terminate the authorization of coverage indicating all activities under this permit have been completed."</i>

Chester County Technical Deficiencies		
<p>The Chester County Conservation District has a 25% resubmission fee. Sunoco needs to include this fee with the CCCD resubmittal. Additionally, the CCCD is willing to sit down with the designer of this project to go over their comments. If they would like to do that, contact CCCD directly at 610.925.4920, ext. 107 or jsfranko@chesco.org to set up a meeting.</p>		
1.		<p>Sheet ES 6.80 incorrectly titles two townships as East and West Wheatfield, this needs to be East and West Whiteland. Revise. [25 Pa Code Section 102.11(a)(1)]</p>
	<i>SPLP Response:</i>	<i>The alignment of the project which was shown previously on sheet ES 6.80 has been removed from the scope of the project</i>
2.		<p>The letter from Tetra Tech dated July 18, 2015 concerning infiltration testing says Chester County, Middletown Township. This is the incorrect Township. Revise. [25 Pa Code Section 102.11(a)(1)]</p>
	<i>SPLP Response:</i>	<i>The correct township, Wallace Township, has been identified in the current infiltration report for Fairview Road Block Valve.</i>
3.		<p>There are multiple areas of "Areas to be Bored" in Chester County that show a bend in the pipe alignment. The plan designers need to coordinate with the Pipeline Company and their Drilling Contractor to verify that the illustrated pipeline alignment is feasible for trenchless installation. If additional Entrance and Exit pits are required, they need to be illustrated on the plan mapping and shown within the Limit of Disturbance. For examples refer to sheets 6.38, 6.47, 6.50, 6.51, 6.52, 6.54, etc. 25 Pa Code Section 102.11(a)(1)]</p>
	<i>SPLP Response:</i>	<i>The compound curves identified on the E&S plans accurately reflect the planned HDDs. The designing firm, Rooney Engineering - Tt REI, has consulted with various drilling contractors to ensure constructability.</i>
Page 11		
4.		<p>There is an unlabeled area of disturbance to the South West of the proposed pipelines on sheet ES-6.46. Describe and note the extent of disturbance for this area, check the rest of the plans for similar situations, and address. [25 Pa Code Section 102.11(a)(1)]</p>
	<i>SPLP Response:</i>	<i>Sheet ES-6.46 has been revised so that the area of disturbance is labeled as HDD pull back area and a note has been added that describes the extent of disturbance of the area. The rest of the plans have been reviewed and revised accordingly.</i>
5.		<p>There is a large staging area split between sheets ES-6.56 and ES-6.57 that is bisected by an UNT to Ridley Creek (S-Q61). Provide full E&S Design for all anticipated earth disturbance within this area along with all proposed stream crossing locations to access the North side of the creek for staging activities. Ensure that this impact is included as part of the PA DEP Chapter 105 submittal. [25 Pa Code Section 102.11(a)(1)]</p>

	<i>SPLP Response:</i>	<i>The staging area for this HDD was reviewed. It was determined that the area to the north of stream S-Q61 is not needed for staging activities. The LOD on Sheets ES-6.56 and ES-6.57 has been revised to stop at the floodway of this stream to remove this area from the LOD and to resolve this concern.</i>
6.		Interstate "362" is mislabeled on sheet ES-6.64. It needs to be "352." Revise. [25 Pa Code Section 102.11(a)(1)]
	<i>SPLP Response:</i>	<i>Interstate "362" on sheet ES-6.64 has been revised to "352."</i>
Delaware County Technical Deficiencies		
1.		Are ABACT controls being used in HQ and EV watersheds? It is hard to tell based on the plans and the line type used for sediment barriers not differentiating between sock and fence. Clarify.
	<i>SPLP Response:</i>	<i>Yes, ABACT controls are being used in HQ and EV watersheds. Specifically, CFS is used as the ABACT control throughout the project. The details note that Silt Fence can be used in place of CFS in non-HQ/EV areas, if desired.</i>
2.		The Southwest corner of the intersection of the Street Road and Route 352 is the site of the former Fairhope Orchard. This site was subject to arsenic contamination, and required blending of the soil for mitigation. Has this issue been evaluated for potential impacts from this new excavation? Clarify.
	<i>SPLP Response:</i>	<i>This area has been identified on ES--6.01 and the following note added: "Former Fairhope Orchard. Implement additional dust control measures at this area."</i>
3.		Sheet E&S 6.03 -
	a.	Sta 15618+50: The run-off from the nursery, Wedgewood Gardens has a BMP in the corner of their property. The pipeline also crosses an existing residential construction site. This will impact the slope lengths and stabilization efforts in the area of the cross culvert.
	<i>SPLP Response:</i>	<i>There is a catch-basin at Sta. 15618+50, on the northeast side of Slitting Mill Road, which presumably discharges southwest through a conduit under Slitting Mill Road. The HDD profile indicates that the drill for the pipeline is at depths of 15 and 17 feet below grade at the center of Slitting Mill Road. Because the drill and pipeline will be sufficiently below grade, no impact to the slope lengths and stabilization efforts in the area of the cross culvert is expected.</i>
	b.	Two crossings at Sta 15632+50 do not cross the stream in a perpendicular fashion, how will the disturbed channel be stabilized?
	<i>SPLP Response:</i>	<i>The referenced stream, S-B37, is an Ephemeral Stream and the crossing is expected to occur only during dry conditions, when the stream is not flowing. In addition, the profile restoration and revegetation will be conducted as quickly as possible after the stream is crossed to immediately stabilize the channel bed and banks with blanketing and seeding.</i>
4.		Sheet E&S 6.04

Page 12		
	a.	Areas to be bored are not shown within the limits of disturbance. Some of the areas are forested. Will they need to be cleared and grubbed, which would be considered earth disturbance?
	<i>SPLP Response:</i>	<i>Surface features over an area subject to HDD will not be impacted (i.e. will not be cleared and grubbed) and therefore are not considered earth disturbances.</i>
	b.	Waterbars from the disturbed areas cannot discharge without the benefit of BMP's. Please illustrate a design detail for a BMP for such a discharge.
	<i>SPLP Response:</i>	<i>Compost Filter Socks (CFS) are applied at the end of each water bar, and along the edges of the ROW parallel to pre-disturbed surface gradients. Per the DEP BMP manual, edges of CFS are turned "upflow" at each location. The waterbar detail has been modified to indicate the addition of the compost filter socks at the end of waterbars.</i>
5.		Sheet E&S 6.09 - Unsure why the LOD is illustrated only to the west of the bored pipeline. What is the disturbance that will take place from Sta.15851+00 through 15859+00?
	<i>SPLP Response:</i>	<i>This area is actually on Sheet ES-6.16. The LOD was previously shown for access to the HDD. It was determined this access is not required so the LOD and corresponding E&S controls have been removed.</i>
6.		Sheet E&S 3.24
	a.	The pipeline appears to be passing through Linvilla Orchard. Has this area been evaluated for Arsenic Contamination?
	<i>SPLP Response:</i>	<i>The area has not been evaluated for arsenic contamination. The following note has been added: "Linvilla Orchard. Implement additional dust control measures at this area."</i>
	b.	Will the proposed waterbars discharge to stabilized areas or areas of row crops in the area of Linvilla?
	<i>SPLP Response:</i>	<i>The water bars will discharge through CFS to stabilized (undisturbed) area which can either be the crop field or unworked area. Compost Filter Sock (CFS) are applied at the end of each water bar, and along the edges of the ROW parallel to pre-disturbed surface gradients. Per the DEP BMP manual, edges of CFS are turned 'upflow' at each location.</i>
7.		Sheet E&S 6.31 - The Pipeline is going through an active fill site with E&S controls in place. Coordinate with site officials to not adversely impact existing BMP's without adequate remedial measures.
	<i>SPLP Response:</i>	<i>SPLP's construction manager and contractor will coordinate with the landowner, Danbro, L.P. to ensure continuity in E&S controls.</i>
8.		Sheet E&S 6.32 - Is Repauso Creek shown on the sheet? Locate.

	<i>SPLP Response:</i>	<i>Sheet ES-6.32 has been updated and the Repauso Creek reference has been removed.</i>
9.		Sheet E&S 6.34 - How will the HDD pull-back areas affect the wetland? Will it result in compaction? Could the area be done on timber mats?
	<i>SPLP Response:</i>	<i>The pipeline pullback string must be staged, welded, etc. in a dry environment – therefore the temporary bridging is shown. There is room for the pipeline string and a vehicle on the bridge at the same time. No vehicles or materials are expected to be in the wetlands (unless on the temporary bridges). Since equipment is on temporary matting, compaction of the area is minimized.</i>
10.		Sheet E&S 6.35 - How will the HDD pull-back areas affect the wetland? Will it result in compaction? Could the area be done on timber mats?
	<i>SPLP Response:</i>	<i>The pipeline pullback string must be staged, welded, etc. in a dry environment – therefore the temporary bridging is shown. There is room for the pipeline string and a vehicle on the bridge at the same time. No vehicles or materials are expected to be in the wetlands (unless on the temporary bridges). Since equipment is on temporary matting, compaction of the area is minimized.</i>
Twin Oaks Station Technical Deficiencies - all Deficiencies relate to 25 Pa Code §102.11(a)(1)		
1.		A large area is shown within the LOD to the North side of the existing unnamed tributary. Provide a description of the earthmoving to occur in this area. Also, note that no BMP's are currently proposed for this area. Specify BMPs proposed for this location.
	<i>SPLP Response:</i>	<i>The area to the North of the Pad has been removed from the LOD boundary. The new LOD area is 2.40 acres.</i>
2.		Two swales discharge into a long forebay within the Wet Detention Basin. The forebay berm is constructed of planting mix, how will it not be easily eroded as stormwater overtops it?
	<i>SPLP Response:</i>	<i>Swale A from the ME1 project has been constructed and will remain. The basin was redesigned to conform to the SRC (Slow Release Concept) basin, due to the poor infiltration rates obtained for the site. The basin has been generally expanded in footprint and raised up to elevation 108, so that the sand filter media can be drained to the existing crosspipes.</i>
Page 13		
3.		How will the outer structure from the Wet Detention Basin be protected from discharging sediment until it is stabilized?
	<i>SPLP Response:</i>	<i>A 24" compost filter sock will be installed in front of the basin outlet structure to filter sediment laden runoff during construction of the remainder of the pad. Additionally, a permanent CPS screen has been added to the basin outlet structure. CPS stands for "Connector Pipe Screen", manufactured by Fabco Industries. Details are located within the plans.</i>

4.		No erosion and sediment control is specified in the Southeast corner of the project. Specify. [25 Pa Code Section 102.11(a)(1)]
	<i>SPLP Response:</i>	<i>Additional compost filter sock was added in the southeast. The eastern driveway was deleted.</i>
5.		Plans reference ME1 - Existing Pad, but the existing features plan does not illustrate an existing pad. Specify.
	<i>SPLP Response:</i>	<i>The existing features plan was revised to show the existing ME1 pad site and basin.</i>
6.		The plan does not label the building noted in the sequence. The sequence does not reference construction of the illustrated loop access road, parking, driveway, or off street loading area. Specify.
	<i>SPLP Response:</i>	<i>The sequence was revised. There are no new buildings proposed for this phase of ME2.</i>
PCSM Technical Deficiencies		
Post Construction Stormwater Management/Site Restoration Plan (Narrative and Drawings)		
1.		The following technical deficiencies are related to the restoration activities during the earth disturbance activities (as part of the E&S Plans) and post construction (as part of the Site Restoration Plans):
	a.	A Site Restoration Plan narrative shall be provided for the mainline pipeline construction. This narrative can be part of the E&S Plan narrative for the mainlines, and it is required to be in conformance with [25 Pa. Code Sections 102.8(n), 102.8(b), 102.8(c), 102.8(e), 102.8(f), 102.8(h), 102.8(i), 102.8(l) & 102.8(m)]
	<i>SPLP Response:</i>	<i>A site restoration narrative has been added to the E&S plan for the mainline pipeline construction. In addition, Section 3.0 of the Site Restoration and Post-Construction Stormwater Management Plan discusses site restoration for the mainline pipeline. The narratives are in conformance with the E&S Plan for the project.</i>
	b.	Provide more identification in the narratives and on the plan drawings related to topsoil segregation. [25 Pa. Code Sections 102.4(b)(5)(iii), 102.4(b)(5)(vi), 102.4(b)(5)(ix), 102.8(f)(3), 102.8(f)(6) & 102.8(f)(9)]
	<i>SPLP Response:</i>	<i>Topsoil will be stockpiled separate from subsoil in all areas where topsoil is present. Specific topsoil stockpile locations will be determined during construction but will conform to the requirements in the general notes and details on the plan drawings. The right of way detail shows the general topsoil stockpile location relative to the pipe trench and subsoil stockpile, and the soil stockpile detail shows the perimeter E&S BMPs that shall be installed downslope of topsoil stockpiles. The site restoration construction sequence has been updated to provide specifications for backfilling topsoil after final grades are established.</i>
	c.	Provide more identification in the narratives and on the plan drawings related to loosening of compacted soils prior to topsoil placement and stabilization (at the temporary access roads, topsoil stockpiles, access routes along the mainline, etc.). [25 Pa. Code Sections 102.4(b)(5)(iii), 102.4(b)(5)(vi), 102.4(b)(5)(ix), 102.8(f)(3), 102.8(f)(6) & 102.8(f)(9)]

	<i>SPLP Response:</i>	<i>The site restoration construction sequence has been updated in the Site Restoration and Post-Construction Stormwater Management Plan narrative and on the applicable drawing sets.</i>
	d.	Provide a discussion of measures that will be taken to avoid and minimize compaction to the maximum extent practicable and where compaction occurs, what measures will be taken to ensure adequate infiltration and successful vegetation of the right of way. [25 Pa. Code Sections 102.4(b)(4), 102.8(b) & 102.22] The Department recommends you evaluate Section 6.7 (Restoration BMPs) of the PCSM Manual. Ensure notes are included on the drawings and in the documents that will be provided to the construction contractors.
	<i>SPLP Response:</i>	<i>Compaction concerns are restricted to the limit of disturbance, which has been minimized to the maximum extent practicable. Within the pipeline right of way, travel lanes will be utilized to restrict the extent of compaction. Following installation of the pipeline, deep ripping or chisel plowing will occur to alleviate compaction, promote infiltration, and facilitate vegetative growth. The site restoration construction sequence has been updated in the Site Restoration and Post-Construction Stormwater Management Plan narrative and on drawing PCS-0.01. The sequence now specifies chisel plowing or incorporating soil amendments where compaction occurs. The sequence also specifically addresses restoration of access roads.</i>
Page 14		
	e.	Describe how your planning and design requirements satisfy 25 Pa. Code Sections 102.4(b)(4) & 102.8(b) and are minimizing the extent and duration of the construction and the minimizing any increase in stormwater runoff. Identify how these measures are satisfied when the ROW is in close proximity or is crossings surface waters or wetlands.
	<i>SPLP Response:</i>	<i>Language regarding planning and design elements that were incorporated to minimize the extent and duration of construction and minimize any increase in stormwater runoff, including when in close proximity to the surface waters and wetlands, has been added to the PCSM narrative.</i>
	f.	Provide an antidegradation analysis addressing the requirements of 25 Pa. Code Section 102.8(h) for the portions of the project that drain to HQ or EV surface waters. Ensure that areas where there may be concentrated stormwater runoff that there are adequate BMPs to control the volume, rate and water quality from the site. [25 Pa. Code Section 102.8(f)(6)]
	<i>SPLP Response:</i>	<i>An Antidegradation analysis has been included as part of the narrative for each of the valve sites. In areas that drain to HQ or EV surface waters, additional BMPs are proposed to treat the water quality.</i>
Control Valve Sites (Exton Junction, Boot Road, Glen Mills, West Baltimore Pike)		
1.		Due to the linear nature of the overall project. Provide the latitude and longitude for each valve site for verifying the responses on DEP Worksheet 1 and other calculation reference data. Add this location information to the PCSM Plan drawing. [25 Pa Code Section 102.8(f)]

	<i>SPLP Response:</i>	<i>The latitude and longitude for each valve site have been added to the respective PCSM plan drawings.</i>
2.		Describe in the PCSM narrative how the stormwater runoff from the control valve pad site is intended to enter the underdrain from the surface. Without a berm, it seems that the rainwater runoff may simply run over the underdrain section and down the side of the control valve pad. But it seems that the underdrain is needed to convey some of the runoff from the control valve pad to the infiltration berm. Address. [25 Pa Code Section 102.8(b)]
	<i>SPLP Response:</i>	<i>The underdrain detail has been revised to show a berm on the downslope side of the valve pad. The berm will prevent stormwater runoff from bypassing the underdrain.</i>
3.		Add the soil survey type, HSG, and boundary limits to the PCSM plan drawings. [25 Pa Code Section 102.8(f)]
	<i>SPLP Response:</i>	<i>The soil survey type, HSG, and boundary limits have been added to the PCSM plan drawings.</i>
4.		Revise the drawing legends to be consistent with the plan drawings. [25 Pa Code Section 102.8(f)]
	<i>SPLP Response:</i>	<i>Drawing legends have been revised to be consistent with the plan drawings.</i>
5.		DEP Worksheet 4 needs to include all of the areas within the entire limit of disturbance for each Point of Interest. Amend the DEP Worksheet 4s accordingly. [25 Pa Code Section 102.6(a)(1)]
	<i>SPLP Response:</i>	<i>DEP worksheet 4 now includes all areas within the limit of disturbance within the evaluated drainage areas to the point of interest.</i>
6.		There are control valve sites in which the proposed infiltration berm is managing less than 90% of the disturbed areas. In these cases, DEP Worksheets 12 and 13 are needed with additional BMPs that manage this uncaptured runoff. [25 Pa Code Section 102.6(a)(1)]
	<i>SPLP Response:</i>	<i>The PCSM designs have been revised to control/manage stormwater runoff from 90% of the disturbed area with a PCSM BMP. The detained drainage areas on the post-development plan drawings show the extent of the disturbed areas that will be managed by a PCSM BMP.</i>
Page 15		
7.		Provide in hard copy form the outlet structure input data for the HydroCAD stormwater model for each of the infiltration berms; this needs to include the critical widths and elevations of the infiltration berm. Provide the stage-storage table for each infiltration berm from HydroCAD. Also, provide the infiltration data and volume from the HydroCAD model. [25 Pa Code Section 102.8(g)]

	<i>SPLP Response:</i>	<i>The time of concentration adjustment method has been used to adjust the post-development detained time of concentration, in accordance with the methodology outlined on Page 39 of Chapter 8 of the PA Stormwater BMP Manual. The adjusted time of concentration was applied within the Hydraflow model.</i>
8.		Verify the critical stages of the infiltration berms and underdrains, and any other stormwater BMPs for these valve sites. These need to have licensed professional oversight during construction, and this needs to be noted in the application and the sequence of construction. [25 Pa Code Section 102.8(k)]
	<i>SPLP Response:</i>	<i>The NOI application and construction sequences have been revised to identify the critical stages of construction that need oversight by a licensed professional for the stormwater BMPs proposed across the Project.</i>
9.		Verify the long-term operation and maintenance schedule for the infiltration berms, underdrains, and any other stormwater BMPs for these valve sites. [25 Pa Code Section 102.8(m)]
	<i>SPLP Response:</i>	<i>Long-term operations and maintenance schedules are now provided for all PCSM BMPs and stormwater conveyance BMPs.</i>
10.		Verify the off-site discharge analysis for each of the points of interest. This needs to be discussed in the narrative, reflected on the plan drawings, and addressed in the application. This needs to include detained and undetained areas of discharge from each valve site. It is uncertain from the plan drawings the limits of the applicant's right-of-way/property and the location of the nearest surface water. Amend the plan drawings accordingly. [25 Pa Code Section 102.6(a)(1)]
	<i>SPLP Response:</i>	<i>A separate Offsite Discharge Analysis, Attachment 8 of the NOI, has been prepared for the project consistent with the guidance in DEP Document No. 3150-FS-DEP4124. The PSCM plan evaluates detained and undetained discharges to the point of interest. The plan drawings depict the LOD and right of way. The nearest surface water is shown on the plan drawings or location maps.</i>
Twin Oaks Pump Station Site		
1.		Due to the linear nature of the overall project, provide the latitude and longitude for the Twin Oaks pump station site for verifying the responses on DEP Worksheet 1 and other calculation reference data. Add this location information to the PCSM Plan drawing. [25 Pa Code Section 102.8(f)]
	<i>SPLP Response:</i>	<i>The latitude and longitude of the center of the pad is shown on Sheet 2.</i>

2.		<p>The bottom of the test pits, performed in 2016 (for soil evaluation), extend to elevation 104; however, the bottom of the wet pond BMP is at elevation 103. The test pit(s) need to extend lower to the limiting zone(s). In addition, previous responses from the applicant stated that the soil borings reflected groundwater at 7 feet below grade, which equates to approximately elevation 102. (These boring logs were not received - Provide a copy of these boring logs for our review). The test pit excavation and log needs to be extended to this groundwater limiting zone elevation following Appendix C of the PA Stormwater BMP Manual. Also, the test pit revealed mottling - is this mottling associated with the adjacent wetland and/or unnamed tributary? This was not discussed in the narrative. Or is this mottling associated with the groundwater? With the information provided, it difficult to review when the test pit did not extend to the elevation of the groundwater encountered in the soil borings. Provide adequate descriptive explanation. There is a concern that the subsurface water may have an adverse impact on the intended function and volume capacity of the proposed basin. There is also a concern that the adjacent wetland and watercourse will be adversely affected by the proposed basin. [25 Pa Code Section 102.8(g)(1)]</p>
	<p>SPLP Response:</p>	<p>All test pits and borings completed for this site are shown on Sheet 2. In 2013, borings were completed (GB1, GB2) to a depth of 25' below the surface. Groundwater was encountered at both borings at approximately 7.5' depth, which equates to an elevation of 102 to 103. In 2014, two infiltration tests were completed in the area of the detention basin (IT-01, IT-02). Tests were conducted at 4' to 4.5' depth with the single ring falling head method. The results were not acceptable for infiltration BMPs. In 2016, an additional infiltration test (double ring) and two soil profiles were completed outside of the existing basin. As found in 2014, the existing soils have very little infiltration capabilities. With the redesign of this basin into a SRC (Slow Release Concept) basin, the new floor level of the basin bottom is elevation 108, which is 6' above the previously encountered groundwater level. Also, the bottom of the sand filter (106.0) is 4' above the groundwater level and the bottom of the 4" underdrain is 3' above the groundwater level. Because SPLP is providing sufficient distance between the u-drain and the measured groundwater level, the redesigned basin will not have an impact on either the adjacent wetland or watercourse. Due to the depth of the groundwater level there will be no adverse impact on the functionality of the SRC basin.</p>
<p>Page 16</p>		
3.		<p>Verify the hydrologic soil group (HSG) referenced in the narrative for this site. It seems that it differs from the soil survey provided as part of the application. In addition, add the soil survey type, HSG, and boundary limits to the PCSM plan drawings. [25 Pa Code Section 102.8(f)]</p>
	<p>SPLP Response:</p>	<p>All soils within the project area are considered, Mc, Made Land, with a HSG of "C". We can't show soil boundaries on the PCSM plan because all of the soils are Mc and no boundaries are within the project area. A note has been added to Sheet 2.</p>
4.		<p>Amend the PCSM narrative to include a source or reference for the rainfall depths for the 2, 10, 50, and 100 year/24-hour storm events that are used in the stormwater calculations and model. [25 Pa Code Section 102.8(g)]</p>
	<p>SPLP Response:</p>	<p>The PCSM narrative (Section 2.0) was revised to include the source of rainfall depths, which is NOAA Atlas 14, Volume 2, Version 3.</p>

5.		The narrative does not discuss the infiltration tests or soil evaluations performed in 2016. It only discusses the ones done in 2014. Amend the narrative. [25 Pa Code Section 102.8(g)(1)]
	<i>SPLP Response:</i>	<i>The PCSM narrative was revised to include testing completed in 2016. See Section 5.0 and Appendix G.</i>
6.		How does the wet pond manage the volume and water quality? Thoroughly describe how the proposed wet pond will achieve 25 PA Code §102.8(g)(2) - manage the net change in runoff volume and water quality from storm events up to and including the 2-year/24-hour storm (pre-development to post-development conditions) (also known as the "delta 2"). In addition, how does the wet pond dewater this net change in runoff within 72 hours? There is a reference to 12,327 cubic feet that is listed as managed volume - verify and provide reference on the PCSM Plan drawing for this volume. [25 Pa Code Section 102.8(g)]
	<i>SPLP Response:</i>	<i>The wet pond design has been revised to a SRC basin. The orifice was placed at the "Delta 2" volume so that the increased volume can be treated by the sand media layer. The basin floor was elevated to create positive outflow of the basin to the existing cross pipe elevation of 105.0. A 4" underdrain will allow complete dewatering of the sand media layer. The valve within the outlet structure will permit the drawdown rate to be adjusted to meet the 72 hour dewatering schedule. The basin provides both peak flow and volume control for the 2 year storm, and meets the 50% release rate guideline..</i>
7.		Add the top and bottom elevations associated with the net change in runoff volume (delta2) within the basin to the basin section detail (a detail with the outlet structure shown). [25 Pa Code Section 102.8(f)]
	<i>SPLP Response:</i>	<i>The Delta 2 elevations are shown on Sheet 6; 108.0 bottom, 108.20 top.</i>
8.		What is the intent of the 2-foot depth of planting soil proposed at the bottom of the wet pond? How will the collected rainwater, which enters this lower area, exit this lower area when the lower native soils have a 0 inch per hour infiltration rate? [25 Pa Code Section 102.8(b)]
	<i>SPLP Response:</i>	<i>The SRC basin will have a 24" depth layer of sand on top of the 4" underdrain which will allow complete dewatering of the basin.</i>
9.		There is a concern that a 1" diameter orifice will become clogged during operation. How will this smaller sized orifice be protected from clogging? This needs to be addressed in the long-term operation and maintenance schedule. [25 Pa Code Section 102.8(b)]
	<i>SPLP Response:</i>	<i>With the revised footprint of the basin and the decreased depth, the orifice has been revised to 5" in diameter. A CPS screen is proposed to cover the orifice.</i>

10.		Verify the long-term operation and maintenance schedule for the proposed forebay. Describe how this forebay will function and the intent of this forebay. Discuss how potential suspended solids will enter the forebay during a rain event and settle in the forebay (and not be washed into the main wet pond area). [25 Pa Code Section 102.8(m)]
	<i>SPLP Response:</i>	<i>The forebay has been eliminated from the SRC basin design.</i>
Page 17		
11.		Provide in hard copy form the following information from the PondPack model: [25 Pa Code Section 102.8(g)]
	a.	The summary table for each point of interest (pre vs post development condition).
	<i>SPLP Response:</i>	<i>Please see the PCSM report, Section 3.0, Table #1 for a summary of all the pre and post points of interest.</i>
	b.	The stage-storage table for the basin (elevation and volume).
	<i>SPLP Response:</i>	<i>Please see the PCSM report, Section 4.0, Table #3 for a stage storage/elevation table.</i>
	c.	The outlet structure data.
	<i>SPLP Response:</i>	<i>The PondPack outlet structure data is included in the PCSM report.</i>
	d.	The schematic diagram of the inflows, basin, bypass flows, outflows with the PondPack IDs.
	<i>SPLP Response:</i>	<i>The PondPack schematic of inflows, basin, bypass areas has been added to the PCSM report.</i>
	e.	The time of concentration data, drainage areas, CN computation (with existing and proposed cover types and associated areas).
	<i>SPLP Response:</i>	<i>All Tc data, DA's and CN (time of concentration, drainage areas and curve numbers) computations are included within the PondPack data in the PCSM report.</i>
12.		Update the PCSM plan drawings with the following items: [25 Pa Code Section 102.8(f)]
	a.	Differentiate between existing features/topo and proposed features/topo with greyed/shaded lines for existing and bolder lines for proposed.
	<i>SPLP Response:</i>	<i>All existing features (ME1 pad) and basin are shown as shaded lines. Proposed features are shown as bold lines.</i>
	b.	Add the bypass drainage area(s) with the bypass drainage area(s) listed in square feet - bypass flow (bypassing the basin) is discussed in the narrative.

	<i>SPLP Response:</i>	<i>All pre/post drainage areas and bypass drainage areas are shown on Sheet 4. All areas are listed in acres and square feet.</i>
	c.	Add the amount of area for the limit of disturbance in square feet. This needs to match the amount for the managed area in DEP Worksheet 4. Please note the cover sheet for the Twin Oaks Pump Station PCSM plan set reflects a limit of disturbance of 6.46 acres - this should be corrected to match the subject of the PCSM plan drawings.
	<i>SPLP Response:</i>	<i>The PCSM plans were revised to show the LOD area in square feet. WS #4 has also been revised to match the LOD area in the PCSM plans (the total LOD was revised for only the Project work area.</i>
	d.	Add the different cover types with areas listed in square feet
	<i>SPLP Response:</i>	<i>The PCSM plans have been revised to show the cover type areas listed in square feet.</i>
	e.	Add the time of concentration lines for the drainage area to the basin and the bypass area, and the existing condition.
	<i>SPLP Response:</i>	<i>The PCSM plans have been revised to include time of concentration lines.</i>
	f.	Add all existing contours and tie-ins for the proposed contouring - differentiate with greyed/shaded lines for existing and bolder for proposed.
	<i>SPLP Response:</i>	<i>Existing and proposed contours have been revised to tie in correctly. Existing contour lines have been revised to shaded lines to differentiate between existing and proposed contours.</i>
	g.	Add more labels to the existing and proposed contours to better review the drainage areas. In some areas, spot elevations may be needed to better depict the drainage. The contouring is not clear for the drainage associated with the new pad and proposed driveway, and the existing driveway.
	<i>SPLP Response:</i>	<i>Additional contour labels were added. Existing ME1 pad contours are shown shaded.</i>
Page 18		
	h.	Revise the drawing legends to be consistent with the plan drawings. Also, add more line types to the legend to better depict the different line types found in the plan drawings.
	<i>SPLP Response:</i>	<i>The drawing legend has been revised to be consistent with the plan drawings and to include more line types.</i>
13.		It seems that there is an existing conditions map within the PCSM Plan set. This existing conditions map does not reflect the ME1 Existing Pad or the existing detention basin. All existing features/topo need to be reflected on the map that is titled Existing Conditions. [25 Pa Code Section 102.8(f)]

	<i>SPLP Response:</i>	<i>The existing conditions map has been revised to add the ME1 pad and basin.</i>
14.		Note the stormwater model reflects a 0.025 inch per hour infiltration rate; however, the 2016 infiltration tests resulted in 0 inch per hour. Update the model accordingly. [25 Pa Code Section 102.8(g)]
	<i>SPLP Response:</i>	<i>This rate has been removed from the Bentley PondPack model.</i>
15.		There is a detail for the Basin Outlet Structure on the PCSM Plan - Construction Details sheet. Is the proposed outlet structure or the existing outlet structure? The Section through the proposed wet pond does not reflect an outlet structure; however, the section through the existing detention basin reflects an outlet structure. Also, a Snout is specified on the outlet structure. Snouts are no longer approved by PADEP for water quality credit. In addition, Snouts are usually placed on the interior side of a catch basin or manhole with a sump provided within the structure. The detail on this PCSM Plan sheet reflects the snout on the outside of the outlet structure - what is the intent of the Snout? Is this Snout configuration recommended by the Snout's manufacturer? Does this Snout configuration adversely affect the hydraulics of the outlet structure? [25 Pa Code Section 102.8(f)]
	<i>SPLP Response:</i>	<i>Since the basin was redesigned as a SRC basin, the section view on Sheet 6 depicts the proposed outlet structure. The Snout was removed and a CPS screen is proposed for the outlet structure.</i>
16.		Verify all of the titles for each stormwater BMP detail. It seems that some of the details' titles are not consistent with the labels and notes on the PCSM Plan sheets. [25 Pa Code Section 102.8(f)]
	<i>SPLP Response:</i>	<i>All BMP construction detail titles are consistent with the labeling on the plan views.</i>
17.		Verify the dimensions listed in the Vegetated Channels detail. The headings reflect the units to be feet but the specified dimensions reflect symbols for inches. [25 Pa Code Section 102.8(f)]
	<i>SPLP Response:</i>	<i>The dimensions for the channel were revised to feet.</i>
18.		Verify the critical stages of the wet pond and swales, and any other stormwater BMPs for the Twin Oaks Pump Station. These need to have licensed professional oversight during construction, and this needs to be noted in the application and the sequence of construction. [25 Pa Code Section 102.8(k)]
	<i>SPLP Response:</i>	<i>The critical stage for professional oversight includes all work associated with the SRC Basin, sand filter, underdrain, outlet structure, outlet pipe and anti-seep collar. The sequence has been updated.</i>

Mr. Christopher Smith, P.E.
 Pennsylvania Department of Environmental Protection
 Southeast Regional Office

Page 19		
19.		Verify the long-term operation and maintenance schedule for the wet pond and swales, and any other stormwater BMPs for the Twin Oaks Pump Station. [25 Pa Code Section 102.8(m)]
	<i>SPLP Response:</i>	<i>Additional Long Term Operation and Maintenance of the SRC basin and Swale A channel has been added to Sheet 7.</i>
20.		Verify the off-site discharge analysis for each of the points of interest. This needs to be discussed in the narrative, reflected on the plan drawings, and addressed in the application. This needs to include detained and undetained areas of discharge. It is uncertain from the plan drawings the limits of the applicant's right-of-way/property and the location of the nearest surface water. Amend the plan drawings accordingly. [25 Pa Code Section 102.6(a)(1)]
	<i>SPLP Response:</i>	<i>All post developed and bypass drainage areas discharge to existing surface waters within the Sunoco parcel.</i>

Attached are two copies of the revised documents for your review and approval. A CD with the updated sections is provided with this submission. SPLP appreciates your timely review of this application. Please contact Rob Simcik of Tetra Tech, Inc. with any questions at 412-921-8163, or email Robert.simcik@tetrattech.com.

Sincerely,



Robert F. Simcik, P.E.
 Project Manager
 Tetra Tech, Inc.

RFS/clm

Enclosures: Attachments

cc:

File 112IC05958
 Bill Himes, DEP
 Christopher Smith, DEP
 Joe Sofranko, CHCCD
 Matt Gordon, Sunoco
 Chris Embry, Sunoco
 Karen Gleason, Tetra Tech

Ann Roda, DEP
 Dominic Rocco, DEP
 Chris Myers, BLCCD
 Ed Magargee, DCCD
 Monica Styles, Sunoco
 Brad Schaefer, Tetra Tech