7. The Erosion Control Legend throughout the submission shows the same symbol for 12" sediment barrier, 18" sediment barrier, 24" sediment barrier, and 32" sediment barrier. Some diameters of compost sock are called out with leaders on the plan and some are not. Clearly identify the size of the compost socks on the plans. Make all revisions necessary § 102.4(b)(5)(ix)

8. It is unclear if trees removed during construction of access roads will be replaced during restoration. Clarify/identify whether the temporary access road restoration procedures will include the replacement of trees in areas where tree removal occurred/will occur. §§ 102.4(b)(5)(vi) & 102.4(b)(5)(ix)

Luzerne County

Erosion and Sediment Control Plan Narrative – Proposed Central Penn North

1. Provide calculations that show proposed structural level spreaders reduce the discharge velocity in the receiving flow path to a non-erosive level. You may use the guidance in Item 15 on Page 161 and Appendix G of E&S Manual. Estimating cover type is not acceptable. § 102.11(a)(1)

2. Drainage areas to earthen level spreaders is limited to 1 acre or less. Please revise. (Appendix G of E&S Manual). § 102.11(a)(1)

3. The Manning's n value used for vegetated channels does not conform to Table 6.3. § 102.11(a)(1)

4. Provide calculations to show the anticipated outlet velocity for each proposed outfall. § 102.11(a)(1)

5. A minimum flow length to width ratio of 4L:1W should be provided for all traps located in special protection watersheds (HQ or EV). § 102.11(a)(1)

Erosion and Sediment Control Plan and Post Construction Stormwater Management/Site Restoration Plan Narrative – Temporary and Permanent Access Roads

1. Please provide a copy of the work map used to delineate the watersheds tributary to the proposed level spreaders. These watersheds should be the maximum tributary to the facility as described on Page 123 of the E&S Manual. § 102.11(a)(1)

2. Provide calculations that show proposed structural level spreaders reduce the discharge velocity in the receiving flow path to a non-erosive level. You may use the guidance in Item 15 on Page 161 and Appendix G of E&S Manual. Estimating cover type is not acceptable. § 102.11(a)(1)

3. Temporary lining design information has not been provided for compost sock diversions. § 102.11(a)(1)

Erosion and Sediment Control Plan Narrative – North Diamond Regulator Station

1. Since earth disturbance is proposed within or along Waters of the Commonwealth and/or within the 100 year floodway, in addition to 2 discharges to the stream, the Conservation District requests that a photocopy(s) of any and all required DEP and/or Army Corp of Engineers permits (or) photocopies of all completed permit applications be submitted with the revised plans. § 102.11(a)(1)

2. The E&S plan shows silt socks installed outside of floodplain protection area. Please explain. § 102.11(a)(1)

3. The Manning's n value used for channel 2 grass lining does not conform to Table 6.3. § 102.11(a)(1)

Soil Erosion and Sediment Control Plan / Site Restoration Plan Drawings – Proposed 30" Central Penn North

1. Please provide match lines for adjoining maps (Page 397 of the E&S Manual). (contractor staging area § 102.11(a)(1)

2. Please provide proposed contours for all proposed earthmoving (including diversion swales, flume channel crossings and filter sock diversions) that meet the standards in Item 3 on Page 2 and on Page 398 in the E&S Manual. § 102.11(a)(1)

3. Show all proposed improvements (e.g. level spreaders and rip rap aprons) on the plan map(s) (Page 398 in the E&S Manual). § 102.11(a)(1)

4. Rip rap aprons at sediment trap A should be extended to the toe of embankment and extended a sufficient length in both directions to prevent scour. § 102.11(a)(1)

5. Show the proposed limits of construction on the plan maps. All proposed earthmoving (including E&S BMPs and structural PCSM BMPs) must be within the limits of construction (Item 3 on Page 2 and Page 398 in the E&S Manual). It appears the limit dead ends on the plans for contractor staging area 3 and 3.1. § 102.11(a)(1)

6. The plan map(s) show sediment trap A and Basin 1 discharging to an area that is not identified as a surface water. If this is a non-surface water discharge, provide a discharge analysis that meets the standards of (*Item 4 on Page 2, Item 15 on Page 161*) of the E&S Manual. § 102.11(a)(1)

7. Please provide a copy of the work map used to delineate the watersheds tributary to the proposed contractor yard channels, basins, and traps. These watersheds should be the maximum tributary to the facility as described on Page 123 of the E&S Manual. § 102.11(a)(1)

8. Describe the procedure to be used while conducting earthwork within streams and wetlands. This guidance should meet the standards provided on Pages 42 through 48 of the E&S Manual. It is recommended that you use a mini sequence located near the detail and refer to this mini sequence in the overall sequence. § 102.11(a)(1)

9. All BMP maintenance notes should be removed from the construction sequence. § 102.11(a)(1)

10. Perimeter BMPs have not been provided for existing road culvert at proposed Phase 1 Contractor Yard Spread. § 102.11(a)(1)

11. The plan drawings (not just the E&S narrative) should include a complete schedule of installation and removal of erosion control BMPs as they relate to the various phases of earthmoving activities. § 102.11(a)(1)

12. Provide a typical detail for the proposed flume channel crossing. (Item 9, Page 5 of the E&S Manual) § 102.11(a)(1)

13. Complete the table for Standard Construction Detail 9-1 and 9-3. § 102.11(a)(1)

14. Describe how the discharge(s) from contractor yard sock diversions B and A will be safely conveyed to a surface water (see Item 4 on Page 3 of E&S Manual). § 102.11(a)(1)

15. The plan map(s) show(s) compost sock(s) crossing contours at contractor yard 1, sock 5 through 9. Sediment barriers should be installed at existing level grade (E&S Manual, Pages

61 and 75)Please make all necessary corrections. It is recommended that Figure 4.1 be placed upon a detail sheet for clarity. § 102.11(a)(1)

16. The plan map(s) show compost sock diversion A and B at Yard 2 located in concentrated flow in two locations. Revise the location(s) to avoid concentrated flow (E&S Manual, Page 62 and 67). § 102.11(a)(1)

Best Management Practices and Quantities Plan Set – Proposed 30" Central Penn North

1. The Trench Plug Installation detail is not the most current version of the detail from the E&S Manual. Provide a detail that is in conformance with the current set of standard details from the E&S Manual or provide the required information related to the alternative BMP and design standard. §§ 102.4(b)(5)(vi), 102.4(b)(5)(ix), 102.11(a)(1) & 102.11(b)

Erosion and Sediment Control and Layout Plans Drawings – Access Roads

1. Indicate the type and extent of vegetative cover on the E&S plan map(s) (Page 357 of the E&S Manual). § 102.11(a)(1)

2. Areas of existing culverts are illegible or not shown on the E&S plan. Please provide. § 102.11(a)(1)

3. All existing improvements (e.g. road side swale sheet 1683 3 AR LU 019) should be shown on the E&S plan map(s) (Pages 357 & 398 of the E&S Manual). § 102.11(a)(1)

4. All proposed earthmoving (including E&S BMPs and structural PCSM BMPs) must be within the limits of construction (Item 3 on Page 2 and Page 398 in the E&S Manual). It appears a portion of silt sock on sheet 1683 3 AR LU 014 is outside the limits of construction. § 102.11(a)(1)

5. Soil slopes not provided on the E&S plans. § 102.11(a)(1)

6. The plan map(s) show outfall aprons discharging to an area that is not identified as a surface water. If this discharge was intended to discharge to earthen level spreaders, please explain how this discharge will be safely conveyed to the spreader without causing erosion. If this is a non-surface water discharge, provide a discharge analysis that meets the standards of (*Item 4 on Page 2, Item 15 on Page 161*) of the E&S Manual. § 102.11(a)(1)

7. Identify the perennial and intermittent stream names on the E&S plan as described on Page 398 of the E&S Manual. § 102.11(a)(1)

8. Perimeter BMPs have not been provided for areas downslope of fill for road off of Tripp Road (Sheet 1683 3 AR LU 007.1), east of Wetland W-T07-17001, sheet 1683 3 AR LU 014 and downslope of access road grading sheet 1683 3 AR LU 019. § 102.11(a)(1)

9. The construction sequence calls for level spreaders on Sheet 1683 3 AR LU 008, however there does not appear to be a proposed concentrated flow, i.e. channel or pipe to these areas. Proposed rip rap aprons are positioned in the opposite direction as the spreaders. Please explain. § 102.11(a)(1)

10. Step 1 of the sequence should specify notifications. § 102.11(a)(1)

11. It appears Step 7 should be conducted within Step 3. Please revise. § 102.11(a)(1)

12. The sequence calls for the leveling of side cuts, which are not shown on the E&S plans. § 102.11(a)(1)

13. The sequence calls for the installation of vegetated channels, water quality swales and check dams, which are not shown on the E&S plan map(s). Please make all necessary corrections (see Chapter 2 in the E&S Manual). § 102.11(a)(1)

14. Please specify what erosion controls are to be installed within Step 9. § 102.11(a)(1)

15. As soon as slopes, channels, ditches, and other disturbed areas reach final grade, they must be stabilized (top of Page 260 in the E&S Manual, Steps 8 and 9) This should be clearly stated in the sequence. § 102.11(a)(1)

16. Stockpile locations are not shown on E&S plan. § 102.11(a)(1)

17. Describe the conditions of stabilization that will be achieved prior to removal/conversion of temporary E&S BMPs Step 22). For vegetated areas, the standard in the middle of Page 10 of the E&S Manual should be used. § 102.11(a)(1)

18. The sequence should specify what temporary erosion controls are to be removed. § 102.11(a)(1)

19. The plan map(s) show(s) compost sock(s) crossing contours on sheet 1683 3 AR LU 011, 012, 014 and 019. Sediment barriers should be installed at existing level grade (E&S Manual, Pages 61 and 75). Please make all necessary corrections. It is recommended that Figure 4.1 be placed upon a detail sheet for clarity. § 102.11(a)(1)

20. Show the proposed broad-based dips on the plan map(s) (Item 9, Page 5 of the E&S Manual). § 102.11(a)(1)

21. Proposed rock construction entrance does not appear to be installed at edge of existing public roadway, on sheet 1683 3 AR LU 014 and 1683 3 AR LU 020. Please revise. § 102.11(a)(1)

22. The plan does not show silt socks installed with both ends extended at least 8 feet up slope at 45 degrees to the main sock alignment (Figure 4.1). § 102.11(a)(1)

23. The plan calls for the installation of silt fence along existing road side swale, sheet 1683 3 AR LU 019, which is not shown on the plan map(s) or legend. Please make all necessary corrections. § 102.11(a)(1)

24. The plan drawings (not just the E&S narrative) should include a complete schedule of installation and removal of erosion control BMPs as they relate to the various phases of earthmoving activities. § 102.11(a)(1)

25. The compost sock detail on the plan drawing(s) does not specify the type of mesh to be used. Please make all necessary changes. § 102.11(a)(1)

26. Provide a seed mixture for temporary stabilization (Page 263 of the E&S Manual). Tables 11.3, 11.4, and 11.5 are recommended for selecting seed mixtures. § 102.11(a)(1)

27. Provide specifications for topsoil replacement (Page 263 of the E&S Manual). Table 11.1 should be added to the detail sheet(s). § 102.11(a)(1)

28. The compost sock diversion detail does not provide the specifications for the infill growing media. In addition, Standard Construction Detail Number(s) 6-1 is recommended to show channel installation specifications. § 102.11(a)(1)

29. Provide a construction detail for the proposed earthen level spreader (Item 9, Page 5 of the E&S Manual) on the E&S plan. Standard Construction Detail #9-5 is recommended for this purpose. § 102.11(a)(1)

30. It appears that the proposed driveway apron is an alternate BMP. Alternate BMPs that are not listed in this manual but that provide the same (or greater) level of protection may also be used to attain the regulatory standard. It is incumbent on the person proposing the use of alternative BMPs to demonstrate their effectiveness with appropriate test results or other documentation. Please contact DEP for review of this BMP. § 102.11(a)(1)

31. Complete the table for Standard Construction Detail 9-1 and 9-2. § 102.11(a)(1)

Soil Erosion and Sediment Control Plan Drawings – North Diamond Regulator Station

1. Indicate the type and extent of vegetative cover on the E&S plan map(s) (Page 357 of the E&S Manual). § 102.11(a)(1)

2. Identify the perennial and intermittent stream names on the E&S plan as described on Page 398 of the E&S Manual. § 102.11(a)(1)

3. Describe how the access roads for construction will be stabilized (Page 9 in the E&S Manual). Note: Access roads should be designed according to Chapter 3 of the manual. § 102.11(a)(1)

4. Describe how rain garden and channels will be protected from sedimentation until construction is completed and the site stabilized (see bottom of Pages 10 and 262 in the E&S Manual). § 102.11(a)(1)

5. Perimeter BMPs have not been provided for downslope of stockpiles. § 102.11(a)(1)

6. Step 1 of the sequence should specify notifications. § 102.11(a)(1)

7. The sequence does not specify what erosion controls are to be removed in Step 31. § 102.11(a)(1)

8. As soon as slopes, channels, ditches, and other disturbed areas reach final grade, they must be stabilized (top of Page 260 in the E&S Manual). (steps 8 and 9) This should be clearly stated in the sequence. § 102.11(a)(1)

9. It does not appear that rip rap apron construction is feasible at channel 1B as per dimensions specified. Please revise and check all aprons. § 102.11(a)(1)

10. The compost sock detail on the plan drawing(s) does not specify the type of mesh to be used. Please make all necessary changes. § 102.11(a)(1)

11. Provide a seed mixture for temporary stabilization (Page 263 of the E&S Manual). Tables 11.3, 11.4, and 11.5 are recommended for selecting seed mixtures. § 102.11(a)(1)

Northumberland County

Erosion and Sediment Control Plan Narrative – Proposed Central Penn South

1. The Legend does not include both water bar directional symbols. Please revise. 102.4(b)(5)(ix)

2. Silt Barrier Symbols on plans do not match those found in the Legend and are difficult to read. Please revise. 102.4(b)(5)(vi)

3. The following BMPs are listed in the Summary but are not shown in the Legend: CDM – Check Dam, DWY- Driveway Apron, CS-Cleanout stake, TRV Trash Rack & Anti-Vortex Device, CST-Compost Sock Sediment Trap, WD-Water Deflector. Please correct this omission. § 102.4(b)(5)(vi)

4. The following BMPs are shown in the Legend but are not listed in the Summary or on Detail Sheets: WWC, SBW, ED, SP, WI.1, & WI.2. Please verify and correct this deficiency. § 102.4(b)(5)(vi)

5. Pipeline BMP Installation Sequence does not include the "Local Conservation District" with the agencies to be notified. Please correct this omission. § 102.4(b)(5)(vii)

6. Access Road BMP Installation Sequence does not include the "Local Conservation District" with the agencies to be notified. Please verify and correct this deficiency. § 102.4(b)(5)(vii)

7. Not all standard notes are identical to the Standard Notes given in PA DEP's BMP Manual. Either remove note that says Williams Standard Detail Matches PADEP Standard Detail or change wording to replace "Matches" with "is based on" or "is compatible with", etc. § 102.4(b)(5)(ix)

8. Sheet 1 of 13 Coffer Dam Detail Note 2 references Trench Breakers. This feature is identified as Trench Plugs else-ware in the plans. Please verify and correct for consistency. § 102.4(b)(5)(ix)

9. Not all details include required dimensions with leader lines and relevant notes. Please ensure that all details give complete information. § 102.4(b)(5)(ix)

10. Sheet 5 of 13 Stone & Concrete Inlet Protection –M references Standard Construction Detail # 4-16. The correct Detail is #4-20. Please verify and correct. § 102.4(b)(5)(ix)

11. Wet Intermediate Water Body Crossing Detail on Sheet 5 of 13 & Wet Minor Water Body Crossing Detail on Sheet 6 of 13 should be removed from the plans. Streams >10' but less than 100' wide & most streamc10' wide or less in Northumberland County, Pennsylvania will have sufficient flow to require pump around techniques. These details are not acceptable in Northumberland County. Please clarify & justify their use or comply with this comment. § 102.4(b)(5)(ix)

12. Sheet 6 of 13 shows notes in the Rip Rap Apron at pipe outlets with Flared End Section. Please move these notes for clarity. § 102.4(b)(5)(ix)

13. The chart shown on Rip Rap Stream Bank Stabilization Detail 2 of 2 on Sheet 7 of 13 does not match the standards set forth in Table 6.6 found on Page 135 of DEP's Erosion and Sediment Pollution Control Manual. Please verify and correct as necessary. § 102.4(b)(5)(ix)

14. The Trench Dewatering Detail found on Sheet 9 of 13 does not include all necessary information. Please add the following note to this detail: " Pump Filter Bag shall be placed on a well vegetated area away from construction so that filtered water is not returned to the trench." § 102.4(b)(5)(ix)

15. Where is a Trash Rack and Anti-Vortex Device used in Northumberland Co.? If these are not used in Northumberland County the relevant details should be removed from the plans. § 102.4(b)(5)(ix)

16. Top Soil Segregation Details TS.1, TS.2, and TS.3 note 6 as shown on Sheet 10 of 13 is too general. Please show all Sediment Barriers on the plans and change the above referenced note to read as follows: "Install Sediment Barriers as shown on plan." § 102.4(b)(5)(ix)

17. On Sheet 10 of 13, the reference to (PADEP) in Note #1 on the Temporary Stream Crossing Multiple Pipes Detail should be replaced with "Chapter 105.162." Please correct this reference. § 102.4(b)(5)(ix)

18. On Sheet 10 of 13, the reference to (RCE) in Note #2 should be changed to "Standard Construction Detail # 3-12." Please correct this reference. § 102.4(b)(5)(ix)

19. On Sheet 11 of 13, the Vegetated Channel Detail should include the data chart found in PA DEP BMP Manual Standard Construction Detail # 6-1. Please correct this omission. Include data for all vegetated swales which are part of the project. § 102.4(b)(5)(ix)

20. On Sheet 12 of 13 the Bored Water Body Crossing Detail does not include the minimum distance from top of stream bank to bore pit and receiving pit. Please correct this omission. § 102.4(b)(5)(ix)

21. On Sheet 12 of 13 the Bored Water Body Crossing Detail does not show sediment barriers between the stream and the bore pit and receiving pit. Please correct this omission. § 102.4(b)(5)(ix)

22. On Sheet 12 of 13 the Wetland Installation Procedure Details WCC.1, WCC.2 & WCC.3 do not show Geotextile under spoil and topsoil piles. Please correct this omission. § 102.4(b)(5)(ix)

23. On Sheet 12 of 13 the "Inundated Wetland" Installation Procedure Detail WCC.3 the note numbers are not aligned with the appropriate notes. Please correct this error. § 102.4(b)(5)(ix)

24. On Sheet 13 of 13 the Wood Chip Filter Berm Detail states that "This Williams Standard Detail Matches PADEP Standard Construction Detail # 4-12". Note #6 on the drawing is not found in Standard Detail # 4-12. Please either remove the note that says the Williams Standard Detail Matches PADEP Standard Construction Detail # 4-12 or change it to say it is based on Detail # 4-12 and denote Note #6 as an additional note. § 102.4(b)(5)(ix)

25. Sheet M.O.-0194, the 12" dia. Compost filter sock listed in the Sediment Barrier summary on Sheet 2 of 2 in the Best Management practices and Quantities Plan Set at Station 60+64 – 62+07 is not shown on plan sheet 1of 9. Please verify and correct. §§ 102.4(b)(5)(vi) & 102.8(f)(2)

26. The following Sediment Barriers appear to be listed at the wrong station when compared with the plan drawings: MP-83 12" Dia. Station 4405+35, MP-8824" Dia. Station 4754-+50-4761+00, MP-83 24" Dia. Station 4405+35, MP-88 24" Dia. Station 4761+25-4763+50, MP-88 24" Dia. Station 47+65.00-4769+00. Please verify and correct as necessary. §§ 102.4(b)(5)(vi) & 102.8(f)(2)

27. Shamokin Creek Stream Crossing WW-RS-1001 is shown in Table 3 Sheet 1 of 2 at MP-86. The same Stream crossing is identified on Sheet 3 of 9 at Station 10+35 as WW-T04-1001. Please review and correct as needed. § 102.4(b)(5)(v)

28. South Branch of Roaring Creek Stream Crossing WWW-T47-11002 is shown on sheet 9 of 9 at MP-91.8 (Station 4845+00 but is not shown in the summary tables. Please correct this omission. §102.4(b)(5)(v)

29. The following soil types are shown in Table 5, on the Soil Maps & Soil Report but are not shown in Soil Types and Limitations Chart included on Sheet 1 of 4 Access Roads: HuF, LdF, MkC, WkE, SmB, Du, MkB, CaC, CaD, Ug, Hv, WeC, WeD & LnB. Please correct this omission. § 102.4(b)(5)(xii)

30. Page 24 in the Pipeline BMP Installation Sequence Narrative & Sheet 2 of 3 General Notes do not make clear when the trench is to be dug and the pipe is to be placed in the trench. Please clarify and correct. § 102.4(b)(5)(ii)

31. The Pipeline BMP Installation Sequence on Sheet 2 of 3 General Notes & the General Pipeline Construction Sequence on Page 54 or the E&S Narrative Section 6 should be consistent with each other. Please correct any inconsistencies which may occur between these 2 documents. § 102.4(b)(5)(vii)

32. Section 7.4.1 of the Environmental Construction Plan states that "the Environmental Inspector will determine when sediment barriers can be removed." The Environmental Inspector does not represent any regulatory agency and therefore should coordinate with the local conservation district before removing any BMPs or determining that any disturbed area has reached an acceptable level of final stabilization. These decisions are the responsibility of the conservation district. Please revise this note to reflect that the Environmental Inspector will invite the local conservation district to inspect the site and give their approval of before any BMPs are removed. § 102.4(b)(5)(vii)

33. Wetland Crossing W-T44-11001 is shown on Sheet 6 of 9 at Station 4690+00. This crossing is not shown in the summary tables. Please correct this omission. § 102.4(b)(5)(v)

34. South Branch of Roaring Creek Stream Crossing WWW-T45-1101 is shown on Sheet 8 of 9 at MP-91 but is not shown in the summary tables Please correct this omission. § 102.4(b)(5)(v)

35. South Branch of Roaring Creek Stream Crossing WWW-T47-11001 is shown on sheet 9 of 9 at MP-91.8 (Station 4844+00) and is shown in summary tables as WWW-RS-11001. Please verify and correct as necessary. § 102.4(b)(5)(v)

36. Wetland Crossing W-T44-11001 is shown on Sheet 6 of 9 at Station 4690+00. This crossing is not shown in the summary tables. Please correct this omission. § 102.4(b)(5)(v)

37. South Branch of Roaring Creek Stream Crossing WWW-T45-1101 is shown on Sheet 8 of 9 at MP-91 but is not shown in the summary tables. Please correct this omission. § 102.4(b)(5)(v)

38. South Branch of Roaring Creek Stream Crossing WWW-T47-11001 is shown on sheet 9 of 9 at MP-91.8 (Station 4844+00) and is shown in summary tables as WWW-RS-11001. Please verify and correct as necessary. § 102.4(b)(5)(v)

39. Place Rock Construction entrances at all access points to existing roadways. § 102.4(b)(5)

Erosion and Sediment Control Plan and Post Construction Stormwater Management/Site Restoration Plan Narrative – Temporary and Permanent Access Roads

1. Access Road #075

   a. On Sheet 13 of 23 Construction equipment mats are indicated to traverse an existing culvert at Station 33+70±. The culvert is not shown on Sheets 4, 13 or 19 of 27. Please show all existing culverts on all Access Roads (Plan & Profile). § 102.8(f)(9)

      i. On Sheet 14 of 27 Timber mats are indicated to traverse an existing culvert at Station 1+75±. The culvert is not shown on Sheets 1, 14 or 21 of 27. Please show all existing culverts on all Access Roads (Plan & Profile). § 102.8(f)(9)

      ii. On Sheet 15 of 27 Timber mats are indicated to traverse an existing culvert at Station 22+65±. The culvert is not shown on Sheets 3, 15 or 22 of 27. Please show all existing culverts on all Access Roads (Plan & Profile). § 102.8(f)(9)

      iii. On Sheet 17 of 27 Timber mats are indicated to traverse an existing culvert at Station 67+90±. The culvert is not shown on Sheets 7, 17 or 24 of 27. Please show all existing culverts on all Access Roads (Plan & Profile). § 102.8(f)(9)

      iv. On Sheet 18 of 27 Timber mats are indicated to traverse an existing culvert at Station 100+60±. The culvert is not shown on Sheets 10, 18 or 25 of 27. Please show all existing culverts on all Access Roads (Plan & Profile). § 102.8(f)(9)

   b. There are no BMPs shown on access roads. Is it anticipated there will be no improvements required on any of these roads? Will none of them need widening at any point to allow trucks and equipment to navigate tight corners? Some of the access roads are quite steep. It is reasonable to assume passage of heavy equipment over these roads in all kinds of weather will have an adverse effect on them. Has any consideration been given to the need for water bars or other diversions to relieve run-off quantity and velocity. It is recommended that further thought be given to the initial and continued stability of the access roads and typical details be added to the plans to give guidance to the contractor if the need arises. § 102.4(b)

2. Access Road #076

    a. On Sheet 13 of 23 Construction equipment mats are indicated to traverse an existing culvert at Station 33+70±. The culvert is not shown on Sheets 4, 13 or 19 of 27. Please show all existing culverts on all Access Roads (Plan & Profile). § 102.8(f)(9)

3. The access road narrative in the Erosion and Sedimentation and Post construction storm water management/site restoration plan narrative, plan sheets, Soil erosion and sedimentation control plan/site restoration plan and Access Road Plans do not correspond with each other. It appears that access roads are missing and shown in different locations. Correct with re-submission. § 102.8(f)(9)

4. Access Road Plans and Narrative do not match in accordance with the number of access roadways provided in the application. Provide complete drawings and narrative for all access roads. § 102.8(f)(6)

    a. How is the forested cover of the restored access road ROW restored to its pre-construction conditions? Several locations depict removal of forested vegetation for "area of minimum disturbance or reduced grading" within the ROW. § 102.8(f)(6)

Soil Erosion and Sediment Control Plan / Site Restoration Plan Drawings – Proposed 42" Central Penn South

1. Section C., Item 8 Other Pollutants: No is checked, this should be changed to yes. The majority of the soils along the route of the proposed pipeline are listed as acidic soils. Acid Bearing Rock is anticipated to be encountered throughout the route. There is a potential for Acid Mine Drainage to be encountered & released at various points along the pipeline route. Please justify or correct this entry. § 102.8(f)(12)

Best Management Practices and Quantities Plan Set – Proposed 42" Central Penn South

1. The Trench Plug Installation detail is not the most current version of the detail from the E&S Manual. Provide a detail that is in conformance with the current set of standard details from the E&S Manual or provide the required information related to the alternative BMP and design standard. §§ 102.4(b)(5)(vi), 102.4(b)(5)(ix), 102.11(a)(1) & 102.11(b)

2. The acid producing soil and bedrock control plan note found in the Best Management Practices and Quantities Plan Set, Note "4" should limit the number of days for cover of any stockpiles or berms to 7 days. § 102.8(f)(12)

3. It does not appear the PCSM drawings reflect the PCSM BMP's proposed in the calculations.§ 102.8(f)(8)

4. The access road PCSM plans depict areas to be restored containing the entire ROW. This requires restoration of a large cut/fill since the existing roadway is 10 ft. wide and the ROW is 50 ft. wide. What is the need for such a large access roadway area and how is this area restored to pre-construction conditions. § 102.8(f)(10)

5. Many of the temporary roadways have excessive slopes greater than 10%. How will the temporary access roads be restored as to not concentrate flows and increase the potential for accelerated erosion due to increased run volume and rate? What permanent BMP's will be in place and maintained. § 102.8(f)(4)

6. Storm water narrative for AR-NO-082 states that there are no improvements for the 4,400 linear foot roadway. Access Roadway Site Restoration Plans shows a 50 foot wide limit of disturbance and restoration of the same roadway. Explain the need for the proposed 5 acres of disturbance in the plans vs. no improvements in the narrative. § 102.8(f)(7)

7. PAR-NO-79 narrative states that stone check dams are to be installed in the vegetated water quality swale. The plan drawings do not depict the check dams installed. Additionally, detail how stone check dams will function as a storm water BMP and remove storage volume as stated in the Narrative. The detail in the Best management practices and Quantities plans show what appears to be an earthen check dam reinforced by R-3 Riprap but does not state what the core will be constructed of. Correct and detail what the core will be constructed of in re-submission. §§ 102.8(f)(6) & 102.8(f)(8)

8. Roadway Typical Section "C" found in the Erosion and Sediment Control and Layout plans for access roads shows a varying roadway width. What is the maximum roadway width? § 102.8(f)(6)

Schuylkill County

Erosion and Sediment Control Plan Narrative – Proposed Central Penn South

1. Filter Sock Diversion and Diversion Swale Design (comments apply to the pipeline and to staging area calculations):

    a. The value of the roughness coefficient (n) used in Manning's equation should be varied according to type of liner (permanent grass) and flow depth (see the bottom of Page 129 in the E&S Manual). Make all necessary corrections. § 102.11(a)(1)

b. A spot check of channel linings (permanent grass) found that the anticipated shear stress exceeds the maximum permissible in Table 6.2 in the E&S Manual for one or more channels. Please make all necessary corrections. § 102.11(a)(1)

2. Outlet Protection:

   a. Please provide the information requested by Standard E&S Worksheet #20 for all proposed rip rap aprons in the narrative and on the applicable details. § 102.11(a)(1)

3. Manufacturers' specifications have not been provided for the proposed W3000 erosion control matting. § 102.11(a)(1)

4. As soon as slopes, channels, ditches, and other disturbed areas reach final grade, they must be stabilized (top of Page 260 in the E&S Manual). (steps 8 and 9) This should be clearly stated in the sequence. § 102.11(a)(1)

5. Provide a seed mixture for temporary stabilization (Page 263 of the E&S Manual). Tables 11.3, 11.4, and 11.5 are recommended for selecting seed mixtures. § 102.11(a)(1)

6. Provide specifications for topsoil replacement (Page 263 of the E&S Manual). Table 11.1 should be added to the detail sheets. § 102.11(a)(1)

7. Contractor Yard CS-CY-SC-3-07

   a. Riprap Apron Calculations: Assumptions have been made for the D0 and 3D0 for the riprap apron design. Please clarify what the assumptions have been based on. § 102.11(a)(1)

   b. Please provide the information requested by Standard E&S Worksheets #15 & 16 for all proposed sediment basins. (The rule of thumb may be used to determine the number of holes in the riser of a basin located in a non-special protection watershed.) § 102.11(a)(1)

   c. A spot check of sediment basins found one or more where the dewatering time specified in Item 9 on Page 160 of the E&S Manual is not provided. Please make the necessary changes. § 102.11(a)(1)

   d. A spot check of the tables in Standard Construction Detail Number #7-6 and #7-7 found them to be inconsistent with the supporting calculations. Make all necessary corrections. (i.e. sediment basin #1 riser diameter/Figure 8, sediment basin #2 clean out elevation vs. lowest row of holes and ETE/WTE of basin #1). § 102.11(a)(1)

e. A spot check of the rip rap apron summary table found the pipe diameters for the sediment basin 1 and 2 barrels to be inconsistent with supporting calculations. Make all necessary corrections. § 102.11(a)(1)

f. Please verify the bottom elevation of the sediment basins are not located below the seasonal high water table, adjacent wetlands, or perennial stream channels. § 102.11(a)(1)

g. Sediment Basin #2: Baffle calculations have not been provided. § 102.11(a)(1)

Erosion and Sediment Control Plan and Post Construction Stormwater Management/Site Restoration Plan Narrative – Temporary and Permanent Access Roads

1. Please provide a copy of the work map used to delineate the watersheds tributary to the earthen level spreaders. These watersheds should be the maximum tributary to the facility as described on Page 123 of the E&S Manual. § 102.11(a)(1).

2. Provide calculations for the proposed earthen level spreaders to demonstrate that the structure will reduce the discharge velocity in the receiving flow path to a non-erosive level. You may use the guidance in Item 15 on Page 161 and Appendix G of E&S Manual. § 102.11(a)(1)

3. A spot check of swale calculations revealed that calculations provided for the proposed Water Quality Swale at TAR # AR-SC-063 in Worksheet #21 are not consistent with provided 10-year storm routing calculations for the swale for capacity and drainage area. Please review all swale calculations and make necessary corrections. § 102.11(a)(1)

4. A spot check of swale calculations revealed that the Manning's "n" coefficient provided for the permanent vegetated condition for proposed trapezoidal swales does not, in all cases, match the Manning's "n" values appropriate for the listed liners in Table 6.2 on Page 131 in the DEP E&S Manual. Please review all swale calculations and make necessary corrections. § 102.11(a)(1)

5. Please specify how the temporary access roads will be restored after construction have been completed. § 102.4(b)(5)(vii)

Soil Erosion and Sediment Control Plan / Site Restoration Plan Drawings – Proposed 42" Central Penn South

1. Please provide a location map that conforms to the standards on Page 397 of the E&S Manual. On the overall location map, (24-1600-70-28-A/LL113_9, the county labels are wrong for Schuylkill and Northumberland Counties (Berks County). § 102.11(a)(1)

2. General erosion & sediment control note #30: Please delete this note. Per Standard Plan Note #9, the local conservation district must be notified when unforeseen circumstances occur on the project site. Any changes to the E&S plan need to be proposed to the SCD and red-lined by both the conservation district and the permit holder. § 102.11(a)(1)

3. Show all proposed outfall locations and outlet protection on the plan maps (Item 9, Page 5 of the E&S Manual). § 102.11(a)(1)

4. Please provide all proposed BMPs (i.e. level spreaders, outlets, rock construction entrances) on the plan maps as stated on Page 398 of the E&S Manual. § 102.11(a)(1)

5. The E&S Detail Group Legend appears to provide a suite of options at the locations proposed on the plan maps. For example in a "typical" watershed at "R", the rock construction entrance would be a BMP proposed to minimize erosion and sedimentation; however, the trenched road crossing and bored road/railroad crossing would be the options for crossing the road. BMPs should be specific to each location a BMP is proposed on the plan maps. § 102.11(a)(1)

6. Filter Sock:

    a. Show all proposed compost sock locations on the plan maps (Item 9, Page 5 of the E&S Manual). § 102.11(a)(1) It appears that the compost sock line type may be located under other line types and it is also difficult to determine if the compost sock is located on both sides of the pipeline in some areas. § 102.11(a)(1)

    b. The plan maps show compost socks crossing contours. Sediment barriers should be installed at existing level grade (E&S Manual, Pages 61 and 75). Please make all necessary corrections. § 102.11(a)(1)

    c. The compost sock is shown parallel to the existing roads; however, the pipeline will cross the socks in these locations. Please clarify how the sock will be maintained in those locations. § 102.11(a)(1)

    d. Sufficient surrounding area should be shown on the plan maps to identify receiving watercourses. Where these features are beyond the coverage of the plan maps, they may be identified on the location maps (Page 398 of the E&S Manual). § 102.11(a)(1)

7. Filter Sock Diversion Calculations and Detail:

    a. Sufficient surrounding area should be shown on the plan maps to identify receiving watercourses. Where these features are beyond the coverage of the plan maps, they may

be identified on the location maps (Page 398 of the E&S Manual). § 102.11(a)(1)

b. Please verify that the filter socks used for the design of the filter sock diversions is a 24" sock as shown in the construction detail. § 102.11(a)(1)

c. The maximum effective height of a 24" sock is documented as 19" per the manufacturer's recommendations; therefore, the total depth of a filter sock diversion should also be 19". § 102.11(a)(1)

d. The Filter Sock Diversion (FD) detail should indicate that the "infill material be modified to reduce permeability and promote vegetative growth" per the DEP "Products and Technologies Proposed for Use as E&S BMPs Since the Manual was Published in March 2012" list. Please indicate the growing media and infill specifications on the construction detail. § 102.11(a)(1)

e. In the Filter Sock Diversion (FD) detail it appears the maximum slope is 5:1; however, the calculations (worksheet #11) indicate the slope may exceed 5:1. Please revise as needed. § 102.11(a)(1)

f. The Filter Sock Diversion (FD) detail should indicate that the erosion control matting should be extended to the height of the freeboard (total depth). § 102.11(a)(1)

g. Reference to Note #7 has been provided in the Filter Sock Diversion (FD) detail as indicated for the erosion control matting; however, no Note #7 has been provided. § 102.11(a)(1)

h. It appears the matting on the side slopes will extend uphill past the limit of disturbance and permit boundary. Please verify and revise if needed. § 102.11(a)(1)

i. Please indicate in the construction sequence whether and/or when this BMP will be temporary or permanent. Please indicate if filter socks will be removed and if the diversion swales will be graded out. § 102.11(a)(1)

8. Waterbars:

a. The plans (notices to contractor #3) indicate that waterbars in agricultural/farm fields are temporary; however, the waterbar detail also indicates that all waterbars shown on the plans are intended to be permanent BMPs. Please clarify. § 102.11(a)(1)

b. Please clarify if the waterbar sump placement special protection watershed (WB.2) and compost filter sock and sump at waterbar discharge (WB.3) are the same. Only one detail

should be provided for special protection watersheds. § 102.11(a)(1)

c. The compost filter sock and sump at waterbar discharge (WB.3) requires calculations to determine if the filter sock is adequate to filter the proposed flow (varies with right of way width). § 102.11(a)(1)

9. Miscellaneous Plan comments:

a. 3425+00: Per the existing plans, it appears a BMP should be located at this station. § 102.11(a)(1)

b. 3535+00: Please clarify if a stream crossing is located at approximately this station. § 102.11(a)(1)

c. 3610+00: WW-T18-7007B is not currently shown in the profile. § 102.11(a)(1)

d. 3880+00: WW-T95-8001 has not been provided on Table 2. § 102.11(a)(1)

e. 4020+00: The filter sock diameter is inconsistent between Standard Worksheet #1 and the plan maps. Please revise. § 102.11(a)(1)

f. 4260+00: Per the existing plan maps, it appears a BMP should be located at this station. § 102.11(a)(1)

g. MM-0198 14+00: WW-T43-8001 and WW-T43-8002 are not provided on Table 2. § 102.11(a)(1)

h. Show the locations of the proposed pumped water filter bags on the plan maps (Item 9, Page 5 of the E&S Manual). § 102.11(a)(1)

i. Some of the proposed stream crossings include a dam & pump. Due to the length of time the trench could remain open, an alternate stream crossing method should be considered. § 102.11(a)(1)

j. The Dam and Pump Stream Crossing (DPX) does not show the additional pump and filter bag to dewater the work areas. The ridge top construction (RTC) detail does not detail where E&S BMPs should be installed. § 102.11(a)(1)

k. Construction Sequence:

i. Please integrate the BMP Installation and Removal Notes into the Pipeline BMP

Installation Sequence. § 102.11(a)(1)

ii. Please define "perimeter control". Perimeter controls such as compost sock may be difficult to install before clearing and grubbing of larger sections. § 102.11(a)(1)

iii. A time frame should be provided for construction from initial disturbance to seeding and mulching at any station along the right-of-way. Also, an allowable length of disturbance should be specified in the E&S plan (Page 283 of the E&S Manual). § 102.11(a)(1)

iv. BMP Installation Note #7: This note is not a Standard Note from the E&S Manual. Please revise. § 102.11(a)(1)

l. The specified temporary fertilizer application rate in the BMP Installation and Removal Note #22 is not consistent with Table 11.2. § 102.11(a)(1) * Please see the attached DEP Correction Sheet for amendments to Table 11.2. § 102.11(a)(1)

m. A consistent definition of permanent stabilization should be used throughout the E&S plan notes. § 102.11(a)(1)

n. The check dam detail (CDM) should be modified to show a 6 inch depression in the top of the rock in the center of the channel compared to the rock at the outside edges of the channel to assure stormwater will not flow around the rock at the edges. See Page 379 in the ESPC Manual. § 102.11(a)(1)

o. Provide an alternative detail to the Clean Water Diversion Swale that is contained in the BMP and Quantities Plan Set for use to convey water across the trench when the pipeline trench is open. § 102.4(b)(5)(ix)

p. Pumped water filter bags (PWB) are proposed as the principal method of removing sediment from open trenches. The Cofferdam Stream Crossing Detail (CD) (Sheet 1 of 13) in the Best Management Practices and Quantities Plan Set states that an equivalent dewatering device may be used in lieu of the PWB. Please indicate on the plan drawing that the equivalent dewatering device structure must meet the approval of the PADEP.

q. The Trench Dewatering Detail (TD) (Sheet 9 of 13) indicates that secondary containment must be used when the PWB is positioned within 100 feet of wetland or waterbody. Provide more information on acceptable secondary containment. § 102.4(b)(5)(ix)

r. The Trench Dewatering (TD) Detail found on Sheet 9 of 13 does not include all necessary information. Please add the following note to this detail: " Pump Filter Bag

shall be placed on a well vegetated area away from construction so that filtered water is not returned to the trench. § 102.4(b)(5)(ix)

s. The following BMPs are listed in the Summary but are not shown in the Legend: CDM – Check Dam, DWY- Driveway Apron, CS-Cleanout stake, TRV Trash Rack & Anti-Vortex Device, CST-Compost Sock Sediment Trap, WD-Water Deflector. Please correct this omission. 102.4(b)(5)(vi)

t. The following BMPs are shown in the Legend but are not listed in the Summary or on Detail Sheets: WWC, SBW, ED, SP, WI.1, & WI.2. Please verify and correct this deficiency. § 102.4(b)(5)(vi)

u. Sheet 5 of 13 Stone & Concrete Inlet Protection –M (IPF) references Standard Construction Detail # 4-16. The correct Detail is #4-20. Please verify and correct. § 102.4(b)(5)(ix)

v. On Sheet 12 of 13 the Bored Water Body Crossing (WBX.1) detail does not include the minimum distance from top of stream bank to bore pit and receiving pit. Please correct this omission. § 102.4(b)(5)(ix)

w. On Sheet 12 of 13 the Bored Water Body Crossing (WBX.1) detail does not show sediment barriers between the stream and the bore pit and receiving pit. Please correct this omission. § 102.4(b)(5)(ix)

10. General

a. The plan maps show sediment basins and sediment traps discharging to areas that are not identified as surface waters. If this is a non-surface water discharge, provide a discharge analysis that meets the standards of Item 4 on Page 2 and Item 15 on Page 161 of the E&S Manual. § 102.11(a)(1)

b. All off-site waste and borrow areas must have an E&S plan approved by the local conservation district or the Department fully implemented prior to being activated. Please clarify where the crusher stone and geo-textile fabric will be taken after the contractor staging areas are no longer needed and restored to the existing condition. § 102.11(a)(1).

11. Contractor Yard CS-CY-SC-3-07

a. Riprap Apron Calculations: Assumptions have been made for the D0 and 3D0 for the riprap apron design. Please clarify what the assumptions have been based on. § 102.11(a)(1)

b. Show all proposed compost sock locations on the plan maps (Item 9, Page 5 of the E&S Manual). The location of all compost sock barriers could not be located. § 102.11(a)(1)

c. The notes in bold font in Standard Construction Detail Number #7-7 should be added to the detail sheet. (i.e. missing last standard note from Page 184 of the E&S Manual). § 102.11(a)(1)

d. The construction detail for the proposed concrete cradle does not meet the standards shown in Standard Construction Detail Number #7-17. Make all necessary corrections. § 102.11(a)(1)

e. Provide construction details for the dewatering system for the sediment basins and traps on a detail sheet (Item 9, Page 5 of the E&S Manual). Standard Construction Detail Number #7-18 is recommended for this purpose. § 102.11(a)(1)

f. The diversion swales that discharge to the proposed sediment basins and traps should extend down the slope of the basins/traps and the aprons provided on the flat basin bottom. § 102.11(a)(1)

12. Contractor Yard CS-CY-SC-3-11

a. Show all proposed compost sock locations on the plan maps (Item 9, Page 5 of the E&S Manual). The location of compost sock barriers #3, #5 and #23 could not be located. § 102.11(a)(1)

13. Contractor Yard CS-CY-SC-3-014.1

a. Please provide a location map that conforms to the standards on Page 397 of the E&S Manual. Please provide a parcel # or address along Suedberg Road. § 102.11(a)(1)

b. Please provide a copy of the work map used to delineate the watersheds tributary to the proposed diversion swale and compost sock trap. These watersheds should be the maximum tributary to the facility as described on Page 123 of the E&S Manual. § 102.11(a)(1)

c. Please provide a step in the construction sequence for the compost sock sediment trap. § 102.11(a)(1)

d. Riprap Apron Calculations: Assumptions have been made for the D0 and 3D0 for the riprap apron design. Please clarify what the assumptions have been based on. §

102.11(a)(1)

14. Contractor yard CS-CY-SC-3-015

    a. A spot check of the sediment barrier table found the sock diameters to be inconsistent with supporting calculations (standard worksheet #1). Make all necessary corrections. § 102.11(a)(1)

15. Contractor yard CS-CY-SC-3-016

    a. It appears that a stabilized construction entrance is needed off SR 25 (East Main Street). See Pages 13 through 17 in the E&S Manual for guidance regarding stabilized construction entrances. Please make all necessary corrections and add the entrance to the construction sequence. § 102.11(a)(1)

16. Contractor yard CS-CY-SC-3-017

    a. It appears that a stabilized construction entrance is needed off of Valley Road and/or the private driveway adjacent to the staging area. See Pages 13 through 17 in the E&S Manual for guidance regarding stabilized construction entrances. Please make all necessary corrections and add the entrance to the construction sequence. § 102.11(a)(1)

    b. Wetlands are completely wrapped in compost sock. Please clarify how the sock will be maintained in those locations. § 102.11(a)(1)

    c. As per general erosion and sediment control note #6, please show the minimum setback of 50 feet from the edge of the wetland. § 102.11(a)(1)

<u>Best Management Practices and Quantities Plan Set – Proposed 42" Central Penn South</u>

1. The Trench Plug Installation detail is not the most current version of the detail from the E&S Manual. Provide a detail that is in conformance with the current set of standard details from the E&S Manual or provide the required information related to the alternative BMP and design standard. §§ 102.4(b)(5)(vi), 102.4(b)(5)(ix), 102.11(a)(1) & 102.11(b)

<u>Erosion and Sediment Control and Layout Plans Drawings – Access Roads</u>

1. Temporary Access Road (TAR) AR-SC-064 is identified on the plan drawing sheet as being located in Tremont Township. This temporary access road is actually located in Pine Grove Township. Please revise. § 102.11(a)(1)

2. The type and extent of existing land cover provided on the plan drawings is incomplete. The existing surface of existing roads, locations of proposed roads, etc. has not been clearly shown. (Page 357 of the E&S Manual). § 102.11(a)(1)

3. Sufficient surrounding area should be shown on the plan drawings to identify tributary drainage areas, receiving watercourses, and actual locations of proposed access roads in relation to public roads. The location map has too large a scale to locate points of access, while the pipeline drawings do not include the total extent of access roads. § 102.11(a)(1)

4. Please provide proposed final contours for all proposed earthmoving. § 102.11(a)(1)

5. A wide corridor is included within a Limit of Disturbance, and the general proposed road profiles show excavation and widening of existing roads; however, widening of existing roads is not shown. Please clarify the following on the plan drawings, to be consistent with the information provided in the E&S narrative for each TAR:

    a. Indicate what the maximum temporary access road width is required for construction traffic. § 102.11(a)(1)

    b. Specify the proposed width of the new temporary access roads. § 102.11(a)(1)

    c. Specify the proposed widening of existing access roads. § 102.11(a)(1)

6. The construction sequence for access roads indicates that topsoil will be stripped from access road areas and stockpiled within the right-of-way; however, no topsoil stockpiles were found on the E&S plan drawings. § 102.11(a)(1)

7. The Limit of Disturbance line cuts through existing ponds along Buechler Road along access road # AR-SC-063. § 102.11(a)(1)

8. Proposed access road # AR-SC-074 and associated drainage structures are shown within the floodway. Please provide a copy of all required permitting for obstruction and encroachment within the floodway. § 102.11(a)(1)

9. Specify, on the plan drawings, how the access roads for construction will be stabilized (Page 9 in the E&S Manual). Note: Access roads should be designed according to Chapter 3 of the manual. § 102.11(a)(1)

10. Describe how Water Quality Swales will be protected from sedimentation until construction is completed and the site stabilized (see bottom of Pages 10 and 262 in the E&S Manual). § 102.11(a)(1)

11. Stabilized construction entrances are needed where unstabilized roads or existing (gravel) roads disturbed by construction traffic meet public roads. Please show all rock construction entrances on the plan drawings. See Pages 13 through 17 in the E&S Manual for guidance regarding stabilized construction entrances. § 102.11(a)(1)

12. The construction detail provided for the proposed channels is a detail for a grass-lined conveyance; however, stormwater volume credit is taken for vegetated water quality filter swales. Please refer to the DEP stormwater manual for construction specifications for the Water Quality swales, and provide appropriate details. § 102.11(a)(1)

13. The plan map(s) show(s) compost sock(s) crossing contours at various locations. Sediment barriers should be installed at existing level grade (E&S Manual, Pages 61 and 75). § 102.11(a)(1) Please make all necessary corrections. It is recommended that Figure 4.1 be placed upon a detail sheet for clarity. § 102.11(a)(1)

14. The plan map(s) show(s) compost sock(s) located in concentrated flow in various locations. Revise the location(s) to avoid concentrated flow (E&S Manual, Page 62 and 67). § 102.11(a)(1)

15. The construction detail provided for proposed earthen level spreaders is incomplete and does not specify dimensions for each proposed spreader. § 102.11(a)(1)

16. Broad based dips could not be found on the proposed access roads in the plan drawings. Please specify what BMPs will be used to manage erosive runoff on access roads during construction and after construction. § 102.11(a)(1)

17. Erosion control matting installation should be shown on the plan drawings on all locations of disturbed areas with slopes of 3:1 and steeper. § 102.11(a)(1)

18. Timber mats are shown at low points in access roads to covey/maintain drainage of clean upslope water on a road with construction traffic. Please specify what BMPs will be used to clean upslope water clean or provide an alternate means of convey clean water through a construction area. § 102.11(a)(1)

19. Specify on the plan drawings which BMPs will be used on existing gravel roads, many of which have steep slopes and will be heavily used by large construction traffic, to minimize the potential for accelerated erosion and sedimentation during the project. The E&S plans indicated that many of these existing roads will receive no improvements to handle the construction traffic. § 102.11(a)(1)

20. Specify on the plan drawings which BMPs will be installed on existing gravel and newly constructed roads in order to minimize the potential for accelerated erosion and maintain road integrity after construction and stabilization of the project. § 102.11(a)(1)

21. Provide details and specifications for the proposed Site Restoration and Areas of Minimum Disturbance/Reduced Grading on the plan drawing(s). The plan drawings show that the areas specified as "Areas of Minimum Disturbance/Reduced Grading" are within the limits of disturbance and in access roads. § 102.11(a)(2)

Susquehanna County

Soil Erosion and Sediment Control Plan / Site Restoration Plan Drawings – Proposed 30" Central Penn North

1. It appears that a stabilized construction entrance is needed at (*T-501, T-510, T-383, SR-2041, T-503, SR-2023, SR-2043 and SR-2020*). See Pages 13 through 17 in the E&S Manual for guidance regarding stabilized construction entrances. § 102.11(a)(1)

2. Show one proposed limit of construction on the plan maps. All proposed earthmoving (including E&S BMPs and structural PCSM BMPs) must be within the limits of construction. Remove any reference to "LOD 5' Buffer" to avoid confusion (Item 3 on Page 2 and Page 398 in the E&S Manual). § 102.11(a)(1)

3. Please provide a soils delineation line on the plan drawings to show the locations of the soils on the plan map that meets the standards of Page 397 of the E&S Manual. Soil is not linear and will not be properly shown by the legend at the bottom of the plan sheets. § 102.11(a)(1)

4. Reference plan sheet 24-1601-70-28-A/1683_3- CSA-CN-CSA-SU-1-008. All upslope water has not been diverted around the project area; some of the compost filter sock will not be designed properly for the length of slope draining to it. Filter Diversion outlets directly to compost filter sock located on the Eastern side of the site. Please revise. § 102.11(a)(1)

Best Management Practices and Quantities Plan Set – Proposed 30" Central Penn North

1. The Trench Plug Installation detail is not the most current version of the detail from the E&S Manual. Provide a detail that is in conformance with the current set of standard details from the E&S Manual or provide the required information related to the alternative BMP and design standard. §§ 102.4(b)(5)(vi), 102.4(b)(5)(ix), 102.11(a)(1) & 102.11(b)

Erosion and Sediment Control and Layout Plans Drawings – Access Roads

1. Reference plan sheet 24-1601-70-28-A/1683_3-AR-SU-041. The plan map(s) show(s) compost sock(s) located in concentrated flow (outlet of Culvert – 32 LF (12" CMP)). Revise the location(s) to avoid concentrated flow (E&S Manual, Page 62 and 67). § 102.11(a)(1)

2. Reference plan sheet 24-1601-70-28-A/1683_3-AR-SU-046. It appears that the stabilized construction entrance may be better located where the access road meets the main roadway. See Pages 13 through 17 in the E&S Manual for guidance regarding stabilized construction entrances. § 102.11(a)(1)

Soil Erosion and Sediment Control Plan Drawings – Zick Meter Station

1. Reference Plan sheet (30-3680)MF-1A-11. Soil delineation lines are not shown in the legend. Please revise. The plan map(s) show(s) compost sock(s) crossing contours at (CFS# 3,4,5,6,9 & 10). Sediment barriers should be installed at existing level grade (E&S Manual, Pages 61 and 75). Please make all necessary corrections. It is recommended that Figure 4.1 be placed upon a detail sheet for clarity. For clarity, please move the sequence of construction from sheet 10 to sheet 8 to avoid confusion. § 102.11(a)(1)

Wyoming County

Erosion and Sediment Control Plan Narrative – Proposed Central Penn North

1. The scale of the plan maps should be large enough to clearly depict the topographic features of the site. Please revise all sheets to conform to the standards in Appendix D (Pages 397 and 398) of the E&S Manual. § 102.11(a)(1)

Soil Erosion and Sediment Control Plan / Site Restoration Plan Drawings – Proposed 30" Central Penn North

1. Please provide a mapping symbols legend, north arrow, graphic scale that conforms to the standards on Page 397 of the E&S Manual. § 102.11(a)(1)

2. Indicate the type and extent of vegetative cover on all plan maps (Page 357 of the E&S Manual). § 102.11(a)(1)

3. The plan maps show compost socks crossing contours on all plan maps. Sediment barriers should be installed at existing level grade (E&S Manual, Pages 61 and 75). § 102.11(a)(1) Please make all necessary corrections. It is recommended that Figure 4.1 be placed upon a

detail sheet for clarity. § 102.11(a)(1)

4. The plan maps show compost socks located in concentrated flow on pipeline maps 1, 2, 4, 5, 6, 9 and 10 and access road plans WY-36. Revise the locations to avoid concentrated flow (E&S Manual, Page 62 and 67). § 102.11(a)(1)

5. The provided table for the silt sock sizes does not match the drawings. The table needs to be updated to reflect the sizes on the plans. § 102.11(a)(1)

6. The rock filters should not be placed in the channel during construction. § 102.11(a)(1) Please make all necessary changes. § 102.11(a)(1)

7. The silt socks are shown being placed directly through a wetland especially at the LOD. Please provide information as to why the silt socks are needed within a wetland. § 102.11(a)(1)

8. Each wetland crossing should have the individual BMPs that will be used at that crossing specified. § 102.11(a)(1)

9. Access to the contractors work site on Page 7 of the pipeline in Wyoming County does not show any proposed changes. This appears to be where the line will be drilled under the Susquehanna and will be a major work area. Show all proposed improvements (e.g. roads, buildings, utilities) on the plan maps (Page 398 in the E&S Manual). § 102.11(a)(1)

10. There are no details provided for the staging areas on Page 14 of the pipeline plans for Wyoming County. Show all proposed improvements (e.g. roads, buildings, utilities) on the plan maps (Page 398 in the E&S Manual). § 102.11(a)(1)

11. There is a stockpile location in the Eaton Township contractor's yard that is completely surrounded by silt sock with no access to the stockpile. Please show how this area will be accessed. § 102.11(a)(1)

12. There is no rock construction entrance (RCE) located at the contractor's staging area at the Eaton Township. yard location. Please provide a stabilized construction entrance at this contractor's staging area yard. See Pages 13 through 17 in the E&S Manual for guidance regarding stabilized construction entrances. § 102.11(a)(1)

13. The contractor staging area that is located in Clinton Township near the Compressor station does not show any proposed contour lines or any improvements. The plan does call for 6 inches of stone to be placed over the site and used as is. The site is on a slope that would not be suitable for as is. Please show any or all improvements. § 102.11(a)(1)

14. Contractor staging area that is located in Clinton Township and near the compressor station has been modified by Penn DOT and is in use as a staging area for their use. The plan maps that are provided do not show the conditions as they exist on site or will exist when the pipeline used the area. Please provide the existing and proposed conditions, including any grading, proposed BMPs, etc. § 102.11(a)(1)

Best Management Practices and Quantities Plan Set – Proposed 30" Central Penn North

1. The Trench Plug Installation detail is not the most current version of the detail from the E&S Manual. Provide a detail that is in conformance with the current set of standard details from the E&S Manual or provide the required information related to the alternative BMP and design standard. §§ 102.4(b)(5)(vi), 102.4(b)(5)(ix), 102.11(a)(1) & 102.11(b)

Erosion and Sediment Control and Layout Plans Drawings – Access Roads

1. The plan maps show compost socks located in series on the access road plan maps, WY-30, 31, 36, and 36.1. Compost socks cannot be placed in series for erosion and sediment pollution control. Please relocate the socks to avoid being in series. § 102.11(a)(1)

Soil Erosion and Sediment Control Plan Drawings – Compressor Station 605

1. Provide the location of the cleanout stake that will be located in the sediment basin near the compressor station in Clinton Township, Wyoming County. § 102.11(a)(1)

2. There are stockpile locations at the Clinton Township compressor station location that will be inaccessible once the channels are placed on site. Please explain how these areas will be accessed after the channels are constructed, or move to places that will have better access. § 102.11(a)(1)

E&S Alternative BMP & Design Standard

1. Flume (Clean Water) Crossing:

   a. Please indicate in the construction sequence whether this BMP will be temporary or permanent. § 102.4(c)

   b. Clarify the Right of Way Slopes in the provided detail. Currently, less than a 20% slope could include 10% and 2%. It appears a range should be provided. § 102.4(c)

   c. A symbol should be provided in the legend and the BMP located on the plan maps. The

symbol should also indicate which of the 6 options will be used in each location. § 102.4(c)

d. The plan view is not consistent with the profile (the berm should terminate at the beginning of the rip rap apron and the rip rap apron should be the same width as the level spreader). Please revise. § 102.4(c)

e. In general, the flume (clean water) crossings do not discharge to a watercourse, channel, surface water, etc. Please explain what will prevent a channel from being formed/eroded below the flumes and describe how the discharges from the channels/flumes will be safely conveyed to a surface water (see Item 4 on Page 3 of E&S Manual). § 102.4(c)

f. The detail indicates that scour stop transmission mats can be installed in lieu of the proposed riprap aprons. Please remove these Transition Mats as they do not dissipate energy and therefore would not be a substitute for riprap. § 102.4(c)

g. Clean Water Crossing Detail on Drawing Number ASR-BMP, Sheet 2 of 13 states "12" high stone level spreader (R-4)". The level spreader "berm" should not allow flow through the berm and should be constructed of compacted earth, concrete or impermeable materials. § 102.4 (c)

h. Provide peak flow calculations for flume channel(s). See Chapter 5 in E&S Manual for guidance on runoff calculations. Standard E&S Worksheets #9 and #10 are recommended for the Rational Equation. An acceptable alternative is the use of the standard multipliers at the top of Standard E&S Worksheet #11. § 102.4(c)

i. The detail for the clean water flume should show the flaring out of the rip rap apron to match the width of the level spreader. For example, the flume at 90.1 must transition from a 12 foot channel to a 27 foot level spreader. § 102.4(c)

j. The plan should verify the total drainage area to clean water flumes. It appears that in some cases (i.e. crossing 97.03) additional water not collected by the upslope diversion channel will reach the flume. § 102.4(c)

2. Waterbar end treatment (non HQ/EV Watersheds): This BMP requires a sediment storage area similar to the Waterbar end treatment in HQ/EV Watersheds. § 102.4(c)

3. Waterbar end treatment (HQ/EV Watersheds): The calculations provided were based on an 18" compost filter sock using a height of 18". Please revise and use the actual filter height of 14.5". § 102.4(c)

Post Construction Stormwater Management Plans

General PCSM Technical Deficiencies related to all documents

1. It appears that the mainline valve pad sites will serve as a PCSM BMP. These pad sites appear to be located in areas that will be backfilled as part of the mainline construction. Clearly identify the location of the mainline valve pad sites, in relation to the all other earth disturbance activities. Protocol 2.2.a of Appendix C of the PCSM Manual recommends against infiltrating in areas of compacted fill. Provide the demonstration that these PCSM BMPs will properly manage the runoff for the function intended. If the recommendations of the PCSM Manual are not followed, then provide a demonstration which identifies how the alternative BMP and design standard will achieve the same regulatory standards as the recommendations of the PCSM Manual. §§ 102.8(f)(15), 102.8(g)(1), 102.8(g)(2), 102.8(g)(3), 102.11(a)(2) & 102.11(b)

2. It is not clear how the rainfall depths were determined. Clearly identify how the utilized rainfall depths were determined for each location (i.e. regulator station, compressor station, permanent access road, etc.). Chapter 8 (Page 6) of the PCSM Manual recommends utilizing the rainfall data from the NOAA Atlas 14. If the recommendations of the PCSM Manual are not followed, then provide a demonstration which identifies how the alternative BMP and design standard will achieve the same regulatory standards as the recommendations of the PCSM Manual. §§ 102.8(f)(8), 102.8(f)(15), 102.8(g)(2), 102.8(g)(3), 102.8(g)(4), 102.11(a)(2) & 102.11(b)

3. Protocol 2.1.c of Appendix C of the PCSM Manual recommends soils underlying infiltration devices to have infiltration rates between 0.1 and 10 in./hr. Protocol 2.1.c also recommends that soils with rates in excess of 6.0 in./hr. may require an additional soil buffer (such as an organic layer over the bed bottom) if the Cation Exchange Capacity is less than 5 and pollutant loading is expected to be significant. If the tested/raw infiltration rates are outside the recommendations of the PCSM Manual, then submit additional information which demonstrates that the proposed alternative BMP and design standard will achieve the same regulatory standards as the recommendations of the PCSM Manual. §§ 91.51(a), 102.8(f)(6), 102.8(f)(15), 102.11(a)(2) & 102.11(b)

4. The narratives identify that a significant number of site specific infiltration testing and soil probes have not been performed, but that prior to construction infiltration testing will be completed. This is not an adequate predevelopment site characterization and assessment of soil and geology. Perform an adequate predevelopment site characterization and assessment of soil and geology. § 102.8(g)(1)

5. The calculations provided in the narratives are difficult to follow and verify. Ensure that all

calculated values are clearly identified, including any formulas used to calculate said values. §§ 102.8(f)(8) & 102.8(g)(4)

6. The provided riparian buffer/riparian forest buffer waiver information appears to be for the project as a whole, and is too vague for the specific riparian buffer/riparian forest buffer waiver being requested for each specific location. Provide the required information for the specific locations of where the riparian buffer/riparian forest buffer waiver is being requested. The additional information should include, but not be limited to, stream impairments/TMDLs (the UNT to Trout Run has a TMDL for the overall watershed), length of time required for the disturbance, plans clearly identifying the areas for waivers, why the alignment is required to change, why additional workspace is required at the particular location. § 102.14(d)(2)

7. The antidegradation analyses are not adequate, as they are too vague and do not contain sufficient information. Make the antidegradation analysis specific to the site for which the PCSM Plan covers (i.e. each discharge along the pipeline, each permanent access road, etc.). This analyses should evaluate and include nondischarge alternatives in the PCSM Plans. If nondischarge alternatives do not exist for the project, then make that demonstration and include in the PCSM Plans antidegradation best available combination of technologies (ABACT) BMPs. Make all revisions necessary. § 102.8(h)

8. The thermal impact analyses appear to be related to the entire project, mainly the proposed transmission line. Provide an identification of potential thermal impacts from post construction stormwater to surface waters of this Commonwealth including BMPs to avoid, minimize or mitigate potential pollution from thermal impacts. Provide a thermal impact analysis for each specific location (i.e. each regulator station, each compressor station, each permanent access road, etc.). § 102.8(f)(13)

9. Ensure that all necessary and regulatory required details and notes are provided for the PCSM BMPs. §§ 102.8(f)(6), 102.8(f)(7), 102.8(f)(9), 102.8(f)(12) & 102.8(g)(5)

10. The restoration plans do not show what portions of the right-of-way, alternate temporary work space and temporary work space will be restored. Please provide accordingly. § 102.8(f)(9)

11. Please show the proposed pipeline on the Erosion and Sediment Control Plans and the Restoration Plans. § 102.8(f)(9)

12. Please be advised that swales with a slope of 6 percent are not acceptable as a water quality BMP. Vegetated swales with slopes greater than 3 percent and less than 6 percent are acceptable as a water quality BMP if check dams are provided and designed according to the

Pennsylvania Stormwater Best Management Practices Manual, November 2006, Chapter 6, vegetated swales. Please check that all vegetated swales being utilized as a water quality or volume control post construction stormwater management BMP are within this requirement. § 102.8(f)(8)

13. An assumed infiltration rate cannot be used to determine if the infiltration swale is adequately designed to infiltrate the stormwater volume increase from existing to proposed conditions. Please provide a test pit/field log information and infiltration testing for each proposed infiltration BMP. § 102.8(f)(8)

14. It appears that volume control BMPS have not been proposed for the proposed access road AR-SU-046. Please provide calculations to determine if any volume control BMPs are required. Should volume control BMPS be necessary, please provide all calculations, plans, details, notes, etc. for constriction of the proposed BMP. § 102.8(f)(6), § 102.8(f)(8), § 102.8(f)(9)

15. Credit may not be taken for multiple BMPs that are located within one another. Each BMP have certain criteria and even though these design criteria may overlap, that actual BMPs may not overlap. Each BMP must remain separate. The BMPs may be used in series or parallel of one another but credit may not be taken for BMPs that appear to be within one another. Please review all BMPs and revise all documentation as applicable. § 102.8(f)(8), § 102.8(f)(9)

16. It is not clear what the infiltration berms will be infiltrating. It does not appear that the infiltration calculations have been provided to show what volume will be infiltrated for each BMP. Please provide the calculations for each proposed BMP. § 102.8(f)(8)

17. Please provide the maximum impervious loading ratio of 5:1 (impervious area to infiltration area) and a total loading ratio of 8:1 (total drainage area to infiltration area) for each infiltration berm. § 102.8(f)(8)

18. 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. §§ 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.

19. Describe how your planning and design requirements satisfy 25 Pa. Code §§ 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.

20. Provide an antidegradation analysis addressing the requirements of 25 Pa. Code § 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. § 102.8(f)(6)

Columbia County

Post Construction Stormwater Management Plan Narrative – Compressor Station 610

1. The soil testing indicates that the limiting zone is above the bottom of the basin and therefore does not provide the required 2 foot buffer. § 102.8(F)(2)

2. Soil testing indicated high water level in the tests near the storm basin expansion. How will water be handled if present. § 102.8(F)(2)

3. Infiltration testing was not conducted at the depth in the soil profile equal to the deepest cuts for the pond bottom. § 102.8(F)(2)

4. Explain why the soil amendment area in the bottom of the basin is less than the surface area at elevation 1200 assumed in the pond routings. § 102.8(F)(2)

5. Provide supporting calculations for worksheet #5 infiltration volumes. § 102.11(a)(2)

6. Provide worksheets from chapter 8 of the stormwater manual to verify that all the requirements to be eligible for the items checked on worksheets #3, #10, and #11 have been met. § 102.8(F)(8)

Post Construction Stormwater Management Narrative – West Diamond Regulator Station

Post Construction Stormwater Management Plan Drawings – Compressor Station 610

1. Explain how the amount of woodland in the developed condition (worksheet #4 – Green Creek) has Explain how the amount of woodland in the developed condition (worksheet #4 – Green Creek) has increased significantly without any woodland plantings. § 102.8(F)(8)

2. Provide supporting calculations for worksheet #5 infiltration volumes. § 102.8(F)(8)

3. If the infiltration berms in the POI C are to be included in the volume reduction calculations, provide calculations showing the amount of drainage area flowing to the berms and that this

area can generate sufficient runoff volume (worksheet 4 procedure) equal to the credit. § 102.8(F)(8)

4. Provide worksheets from chapter 8 of the stormwater manual to verify that all the requirements to be eligible for the items checked on worksheets #3, #10, and #11 have been met. § 102.8(F)(8)

Post Construction Stormwater Management Drawings – West Diamond Regulator Station

1. The soil testing indicates that the limiting zone is above the bottom of the basin and therefore does not provide the required 2 foot buffer. § 102.8(F)(2)

2. Soil testing indicated high water level in the tests near the storm basin expansion. How will water be handled if present. § 102.8(F)(2)

3. Infiltration testing was not conducted at the depth in the soil profile equal to the deepest cuts for the pond bottom. § 102.8(F)(2)

4. Explain why the soil amendment area in the bottom of the basin is less than the surface area at elevation 1200 assumed in the pond routings. § 102.8(F)(2)

5. Provide supporting calculations for worksheet #5 infiltration volumes. § 102.11(a)(2)

6. Provide worksheets from chapter 8 of the stormwater manual to verify that all the requirements to be eligible for the items checked on worksheets #3, #10, and #11 have been met. § 102.8(F)(8).

7. Indicate on the drawing the final cover to be used on the regulator pad area. § 102.8(F)(9)

Lancaster County

Erosion and Sediment Control Plan and Post Construction Stormwater Management/Site Restoration Plan Narrative – Temporary and Permanent Access Roads

1. Provide a separate PCSM Plan for the permanent access roads from the E&S Plan for the permanent access roads. A combined plan, titled Erosion and Sediment Control /Site Restoration Plan, can be provided for the temporary access roads. §§ 102.4(b)(5)(xiv) & 102.8(d)

2. Are the mainline valve sites included in the E&S and PCSM Plans for the permanent access roads? If so, that should be clarified and discussed in the narratives. § 102.8(f)(3)

3. Identify in the narrative whether the receiving surface water is impaired or has a TMDL. For the specific sites (temporary and permanent access roads), ensure that proper and adequate discussion is provided related to the E&S and PCSM design and the impairment and/or TMDL. § 102.8(f)(5)

4. Identify in the table on Page 5 the receiving surface water, the Designated and Existing Uses and if the receiving surface water is impaired or has a TMDL. The table identifies LA-026.4 as a temporary and then as a permanent access road; clarify why this one location is identified twice. § 102.8(f)(3) & 102.8(f)(5)

5. Identify what is meant by the terminology "infiltration losses" in the last sentence of the second paragraph on Page 9. § 102.8(f)(15)

6. The regulatory requirement is to manage post construction stormwater for storm events of a 24-hour duration. Make all revisions to appropriately identify the storm events (e.g. the first sentence of the second paragraph on Page 13). §§ 102.8(g)(2) & 102.8(g)(3)

7. The third paragraph on Page 13 is very confusing related to the Act 167 Plans. Clearly identify to what criteria the PCSM Plan was designed to. On November 7, 2013, DEP approved the Blueprints: An Integrated Water Resources Plan for Lancaster County (Acts 247 and 167) for all of Lancaster County. Make all revisions necessary. §§ 102.8(g)(2) & 102.8(g)(3)

8. The generalized BMP Installation Sequence Narrative in Section 1.7 is not sufficient. Each temporary and permanent access road is different, as a site/location specific construction sequence is required. § 102.8(f)(7)

9. Provide an adequate long-term operation and maintenance schedule in Section 1.10 for all PCSM BMPs. § 102.8(f)(10)

10. Section 1.11 does not identify, address or ensure that proper measures for recycling or disposal of materials associated with or from the PCSM BMPs are in accordance with Department laws, regulations and requirement. Make all revisions necessary. § 102.8(f)(11)

11. Section 1.12 on Page 26 identifies that there may be potential for acid producing rock. Identify if there is or is not the potential for naturally occurring geologic formations or soil conditions that may have the potential to cause pollution during earth disturbance activities and after earth disturbance activities are completed and PCSM BMPs are operational. What investigation has been done to determine if there is potential for acidic runoff from the site (beyond the Soil Survey)? If acid producing rock is present at the site, then provide BMPs to

minimize the potential for pollution. Perform and supply an adequate predevelopment site characterization and assessment of soil and geology. Tailor this discussion for each specific site (temporary and permanent access roads). §§ 102.8(f)(12) & 102.8(g)(1)

Clarify the statement on Page 27 "...the quantity of acidic soils found along the proposed CPL South route may be sufficiently high such that their potential for pollution should be mitigated." If the quantity is sufficiently, how is that mitigated? What investigation has been performed to determine that the amount potential for pollution is mitigated? §§ 102.8(f)(12) & 102.8(g)(1)

12. Section 1.13 does not include a thermal impact analysis for the earth disturbance activity (for the E&S Plan). Provide this thermal impact analysis. Provide the thermal impact analysis for each specific site. § 102.8(f)(13)

13. Revise Section 1.15 to be specific for any requested riparian buffer/riparian forest buffer waivers associated with the temporary and permanent access roads. There is no regulatory requirement to provide a riparian buffer/riparian forest buffer for perennial or intermittent rivers, streams, or creeks, or lakes, ponds, or reservoirs with a Designated Use other than Exceptional Value and High Quality; therefore, a waiver of buffers for these areas is not required. Revise the narrative accordingly. § 102.14(d)(2)

    What purpose does the discussion related to Act 167 Plan have related to the riparian buffer/riparian forest buffer waivers? § 102.8(f)(15)

14. Section 1.16 is not an adequate antidegradation analysis. Make the antidegradation analysis specific to the site for which the PCSM Plan covers (i.e. each temporary and/or permanent access road). The analysis should evaluate and include nondischarge alternatives in the PCSM Plan. If nondischarge alternatives do not exist for the project, then make that demonstration and include in the PCSM Plan antidegradation best available combination of technologies (ABACT) BMPs. Make all revisions necessary. § 102.8(h)

15. The plan drawings provided in Appendix A and B are not current with the latest set of revised full-size plan drawings (e.g. Appendix A Drawing No. 24-1600-70-28-A/LL113_9 has a latest revision date of 12/02/2015; while the full-size Drawing No. 24-1600-70-28-A/LL113_9 has a latest revision date of 02/04/2016). DEP recommends only providing one copy of the plan drawings per application set (do not provide reduced scale drawings in Appendix A and B), to avoid confusion and potential inconsistencies. § 102.8(f)(9)

16. The plan preparer qualifications in Appendix D are qualifications for E&S Plans. Provide documentation that the person who prepared the PCSM Plan is a person trained and experienced in PCSM design methods and techniques applicable to the size and scope of the

project being designed. § 102.8(e)

17. The following technical deficiencies are associated with Appendix I:

    a. The regulatory requirement is to manage post construction stormwater for storm events of a 24-hour duration. Make all revisions to appropriately identify the storm events. §§ 102.8(g)(2) & 102.8(g)(3)

    b. It is identified that the PCSM/SR BMPs were designed to the requirements of Control Guideline 1 (CG-1). CG-1 is a recommended post construction stormwater management from the PCSM Manual; however, the regulatory requirement to control post construction stormwater is 25 Pa. Code §§ 102.8(g)(2) & 102.8(g)(3) (in addition to other sub-sections of 25 Pa. Code § 102.8 and sections of 25 Pa. Code § 102). Make all revisions to appropriately identify the regulatory requirements for post construction stormwater management.

    c. Permanent access road AR-LA-010.2 proposes an offsite discharge to areas other than surface waters. Provide the information required as identified in the attached Off-site Discharges of Stormwater Areas That Are Not Surface Waters Fact Sheet (DEP Document No. 3150-FS-DEP4124) as part of the PCSM Plan. §§ 102.8(f)(9) & 102.8(f)(15)

    d. The proposed impervious loading ratio for the MLV Pad is identified as 1:1; however, based upon the MLV Site AR-LA-10.2 Infiltration Volume calculations, it appears that the infiltration area is smaller than the pad site. Clarify this discrepancy. § 102.8(f)(8)

    e. The provided alternative BMP and design standard demonstration is not sufficient. Provide sufficient information to demonstrate that the proposed loading ratios will achieve the same regulatory standard as the recommended loading ratios of the PCSM Manual. § 102.11(b)

    f. The following technical deficiencies are associated with Appendix I.3:

        i. Provide contour information with the drainage area map, including contour labels. §§ 102.8(f)(8) & 102.8(f)(9)

        ii. The drainage area map identifies a drainage area of 22.38 acres; however, only 0.728 acres is analyzed in the hydrographs. Clarify this discrepancy. §§ 102.8(f)(8), 102.8(g)(3) & 102.8(g)(4)

        iii. If there is a road side ditch/swale along Pequea Creek Road, then revise the Time of

Concentration (Tc) calculations to include a channel flow segment. §§ 102.8(f)(8), 102.8(g)(3) & 102.8(g)(4)

iv. The entire drainage area was analyzed as meadow condition; however, the drainage area map clearly identifies a wooded area. Why was the wooded area not included in the predevelopment analysis? §§ 102.8(f)(8), 102.8(g)(3) & 102.8(g)(4)

v. The hydrograph calculations utilize a 2-year/24-hour rainfall depth of 3.16 inches; however, the Tc calculations utilize a 2-year/24-hour rainfall depth of 3.12 inches. Clarify this discrepancy. §§ 102.8(f)(8), 102.8(g)(3) & 102.8(g)(4)

vi. The utilized rainfall data for the storm events does not match the rainfall data provided by NOAA Atlas 14. Clarify this discrepancy. §§ 102.8(f)(8), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

g. The following technical deficiencies are associated with Appendix I.4:

i. Provide more legible contour information with the drainage area map, including contour labels. §§ 102.8(f)(8) & 102.8(f)(9)

ii. The naming conventions identified on the drainage area map do not match the naming conventions for the hydrographs. Provide a consistent naming convention. § 102.8(f)(8)

iii. How was the storage for the MLV Pad calculated for the hydrograph routing calculations? The total volume identified does not appear to match any of the other volumes identified for this facility. Make all revisions necessary. §§ 102.8(f)(8), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

h. The following technical deficiencies are associated with Appendix I.6:

i. How was the Subreach Volume calculated? Provide the equation that is utilized. § 102.8(f)(8)

ii. Provide discussion as to how/why the Reduce Qi was determined and utilized. § 102.8(f)(8)

iii. The Field Qi is identified as 8.16 in./hr. However, that highest raw infiltration rate tested that was identified in Appendix I.8 is 1.625 in./hr. How was a Field Rate of 8.16 in./hr. determined? §§ 102.8(f)(8), 102.8(g)(1) & 102.8(g)(2)

i. The following technical deficiencies are associated with Appendix I.7:

i. Complete PCSM Standard Worksheet #2, by identifying if there are or are not mapped existing natural sensitive resources. § 102.8(g)(1)

ii. PCSM Standard Worksheet #4 identifies a Managed Area of 1.29 acres; however, an area of only 0.728 acres is analyzed. Clarify this discrepancy. §§ 102.8(f)(8) & 102.8(g)(2)

iii. Utilize the latest version of the PCSM Standard Worksheets #5. How was the volume to be permanently reduced of 2,415 cf calculated for the MLV Pad? §§ 102.8(f)(8), 102.8(f)(15) & 102.8(g)(2)

iv. PCSM Standard Worksheet #10: If the proposed vegetated swale is designed to be utilized with a water quality function (in addition to volume reduction), then design the PCSM BMP in accordance with the recommendations of the PCSM Manual (1-3% longitudinal slope) or provide the appropriate information related to the alternative BMP and design standards. Ensure that all required plan information related to the minimize soil compaction and re-vegetated/re-forest disturbed areas is provided on the PCSM Plan drawings (e.g. seeding mix, long-term operation and maintenance schedule, construction sequence, etc.). §§ 102.8(f)(6), 102.8(f)(7), 102.8(f)(9), 102.8(f)(10), 102.8(g)(2), 102.11(a)(2) & 102.11(b)

v. Identify why PCSM Standard Worksheet #11 has been provided. PCSM Standard Worksheet #11 is to only be provided if the volume reduction cannot be met. § 102.8(f)(15)

j. The following technical deficiencies are associated with Appendix I.8:

i. Is the 'Proposed Elevation' identified on the AR-LA-010.2 Infiltration Testing Locations map the infiltration elevation for the proposed PCSM BMPs? §§ 102.8(f)(8) & 102.8(f)(9)

ii. The Soil Profile Logs identify a seasonal high water table. Identify was observed for that lead to the identification of a seasonal high water table. § 102.8(g)(1)

iii. It appears that a portion of the last column in the Soil Profile Logs is cut-off. Ensure that the entire log is provided. § 102.8(g)(1)

iv. The Table of Contents for Appendix I.8 includes 'MLV Pad Dewatering Calculations'; however, these calculations could not be located. Provide these

calculations. § 102.8(f)(8)

v. The MLV Site AR-LA-010.2 Infiltration Volume calculations are extremely hard to follow. Provide more information so that the calculations can be followed. Ensure that consistent terms are utilized (e.g. 'Water Surface Area' versus 'Storage Area (from Civil 3d)'). § 102.8(f)(8)

18. The following technical deficiencies are associated with Appendix N:

a. The narrative identifies that the dewatering time for the MLV Pad is 13 days, which exceeds the recommended dewatering time of 72 hours from Chapter 3 of the PCSM Manual. It appears that the alternative BMP and design standard discussion is solely related to mosquito control. While the recommended dewatering time does include concerns for mosquito control, there are other concerns that have to be considered (e.g. storage volume available for the next storm event, water quality due to standing water, etc.). Provide an adequate alternate BMP and design standard demonstration. §§ 102.8(f)(6), 102.11(a)(2) & 102.11(b)

b. The regulatory requirement is to manage post construction stormwater for storm events of a 24-hour duration. Make all revisions to appropriately identify the storm events. §§ 102.8(g)(2) & 102.8(g)(3)

c. It is identified that the PCSM/SR BMPs were designed to the requirements of Control Guideline 1 (CG-1). CG-1 is a recommended post construction stormwater management from the PCSM Manual; however, the regulatory requirement to control post construction stormwater is 25 Pa. Code §§ 102.8(g)(2) & 102.8(g)(3) (in addition to other sub-sections of 25 Pa. Code § 102.8 and sections of 25 Pa. Code § 102). Make all revisions to appropriately identify the regulatory requirements for post construction stormwater management.

d. It appears that the receiving surface water for permanent access road AR-LA-018.3 is an unnamed tributary to West Branch Little Conestoga Creek. It appears that the receiving surface water of the unnamed tributary to West Branch Little Conestoga Creek has a Designated Use of Trout Stocking (TSF). Properly identify the receiving surface water and the Designated and Existing Uses. § 102.8(f)(5)

e. Permanent access road AR-LA-018.3 proposes an offsite discharge to areas other than surface waters. Provide the information required as identified in the attached Off-site Discharges of Stormwater Areas That Are Not Surface Waters Fact Sheet (DEP Document No. 3150-FS-DEP4124) as part of the PCSM Plan. §§ 102.8(f)(9) & 102.8(f)(15)

f. The proposed impervious loading ratio for the MLV Pad is identified as 3.6:1; however, the total loading ratio is identified as 1.2:1. How can the impervious loading ratio be higher than the total loading ratio? Ensure that the loading calculations are correct. § 102.8(f)(8)

g. The following technical deficiencies are associated with Appendix N.3:

   i. Provide contour information with the drainage area map, including contour labels. Identify the Time of Concentration (Tc) flow path on the drainage area map. §§ 102.8(f)(8) & 102.8(f)(9)

   ii. The predevelopment drainage area analyzes approx. 1,394 sf of disconnected roofs; however, the drainage area delineation does not appear to encompass any roof areas. Clarify this discrepancy and make all revisions necessary. §§ 102.8(f)(8), 102.8(g)(3) & 102.8(g)(4)

   iii. The utilized rainfall data for the storm events does not match the rainfall data provided by NOAA Atlas 14. Clarify this discrepancy. §§ 102.8(f)(8), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

h. The following technical deficiencies are associated with Appendix N.4:

   i. Provide contour information with the drainage area map, including contour labels. Identify the Time of Concentration (Tc) flow path on the drainage area map. Include the proposed conditions on the drainage area map. §§ 102.8(f)(8) & 102.8(f)(9)

   ii. How was the storage for the MLV Pad calculated for the hydrograph routing calculations? The plan drawings identify the stone pad to be 90-ft. x 52-ft., which results in 4,680 sf. The narrative discussion of the pad identifies a depth of stone of 36-in.; however, it appears that the volume calculations only accounted for 30-in. (which is what is identified on Drawing No. 24-1600-70-28-A/LL113_9-AR-LA-018.3). Make all revisions necessary to correct this deficiency throughout the application documents. §§ 102.8(f)(8), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

i. The following technical deficiencies are associated with Appendix N.5:

   i. PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Witmers Run. This is not consistent with the previous identification of the receiving surface water. Clearly and consistently identify the receiving surface

water. §§ 102.8(f)(5) & 102.8(g)(1)

ii. Complete PCSM Standard Worksheet #2, by identifying if there are or are not mapped existing natural sensitive resources. § 102.8(g)(1)

iii. Utilize the latest version of the PCSM Standard Worksheets #5. §§ 102.8(f)(8), 102.8(f)(15) & 102.8(g)(2)

iv. PCSM Standard Worksheet #10: Ensure that all required plan information related to the minimize soil compaction and re-vegetated/re-forest disturbed areas is provided on the PCSM Plan drawings (e.g. seeding mix, long-term operation and maintenance schedule, construction sequence, etc.). §§ 102.8(f)(6), 102.8(f)(7), 102.8(f)(9), 102.8(f)(10) & 102.8(g)(2)

v. Identify why PCSM Standard Worksheet #11 has been provided. PCSM Standard Worksheet #11 is to only be provided if the volume reduction cannot be met. § 102.8(f)(15)

j. The following technical deficiencies are associated with Appendix N.6:

i. Is the 'Proposed Elevation' identified on the AR-LA-018.3 Infiltration Testing Locations map the infiltration elevation for the proposed PCSM BMPs? §§ 102.8(f)(8) & 102.8(f)(9)

ii. The Soil Profile Logs identify a seasonal high water table. Identify was observed for that lead to the identification of a seasonal high water table. § 102.8(g)(1)

iii. It appears that a portion of the last column in the Soil Profile Logs is cut-off. Ensure that the entire log is provided. § 102.8(g)(1)

iv. Provide specific dewatering calculations for the MLV Pad, including the identification of what Safety Factor was utilized. § 102.8(f)(8)

19. The following technical deficiencies are associated with Appendix O:

a. The narrative identifies the Watershed as Strickler Run; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Strickler Run. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

b. There appears to be no discussion or stormwater management analysis for the permanent access road AR-LA-020. Provide the all necessary information related to the post

construction stormwater management for this permanent access road. § 102.8

20. There appears to be no discussion or stormwater management analysis for the permanent access road AR-LA-021 in Appendix P. Provide the all necessary information related to the post construction stormwater management for this permanent access road. § 102.8

21. For temporary access road AS-LA-023.1 (Appendix Q), the narrative identifies the Watershed as Strickler Run; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Strickler Run. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

22. For temporary access road AS-LA-023.2 (Appendix R), the narrative identifies the Watershed as Shawnee Run; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Shawnee Run. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

23. The following technical deficiencies are associated with Appendix S:

    a. The narrative identifies the Watershed as Chiques Creek; however, PCSM Standard Worksheet #1 identifies the receiving surface water as a tributary to Chiques Creek. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

    b. The regulatory requirement is to manage post construction stormwater for storm events of a 24-hour duration. Make all revisions to appropriately identify the storm events. §§ 102.8(g)(2) & 102.8(g)(3)

    c. It is identified that the PCSM/SR BMPs were designed to the requirements of Control Guideline 1 (CG-1). CG-1 is a recommended post construction stormwater management from the PCSM Manual; however, the regulatory requirement to control post construction stormwater is 25 Pa. Code §§ 102.8(g)(2) & 102.8(g)(3) (in addition to other sub-sections of 25 Pa. Code § 102.8 and sections of 25 Pa. Code § 102). Make all revisions to appropriately identify the regulatory requirements for post construction stormwater management.

    d. Permanent access road AR-LA-026.2.1 proposes an offsite discharge to areas other than surface waters. Provide the information required as identified in the attached Off-site Discharges of Stormwater Areas That Are Not Surface Waters Fact Sheet (DEP Document No. 3150-FS-DEP4124) as part of the PCSM Plan. §§ 102.8(f)(9) & 102.8(f)(15)

    e. The proposed total loading ratio for the MLV Pad is identified as 1:1; however, based

upon the drawings it appears that there is vegetated area tributary to the MLV Pad. Identify the contributory drainage area to the MLV Pad. §§ 102.8(f)(8) & 102.8(f)(9)

f. The following technical deficiencies are associated with Appendix S.3:

   i. The naming conventions identified on the drainage area map do not match the naming conventions for the hydrographs. Provide a consistent naming convention. § 102.8(f)(8)

   ii. If there is a road side ditch/swale along Marietta Avenue, then revise the Time of Concentration (Tc) calculations to include a channel flow segment. §§ 102.8(f)(8), 102.8(g)(3) & 102.8(g)(4)

   iii. The utilized rainfall data for the storm events does not match the rainfall data provided by NOAA Atlas 14. Clarify this discrepancy. §§ 102.8(f)(8), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

g. The following technical deficiencies are associated with Appendix S.4:

   i. How was the storage for the MLV Pad calculated for the hydrograph routing calculations? The total volume identified does not appear to match any of the other volumes identified for this facility. Make all revisions necessary. §§ 102.8(f)(8), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

   ii. The hydrographs appears to utilize a PCSM BMP for runoff control (identified by 'WQS'), and it appears that the BMP is a vegetated swale with check dams. However, this BMP was not discussed in the narrative. Clearly identify what type of PCSM BMP 'WQS' is and provide the appropriate narrative discussion. §§ 102.8(f)(6), 102.8(f)(8), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

   iii. Identify how the volume storage for the WQS was calculated for the hydrograph routing calculations. Make all revisions necessary. §§ 102.8(f)(8), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

h. The following technical deficiencies are associated with Appendix S.6:

   i. How was the Subreach Volume calculated? Provide the equation that is utilized. § 102.8(f)(8)

   ii. Provide discussion as to how/why the Reduce Qi was determined and utilized. § 102.8(f)(8)

iii. Identify how the Field Qi is identified as 0.5 in./hr., as a predevelopment site characterization and assessment of soil and geology could not be located for this permanent access road. Identify how it was determined that infiltration is occurring at the site and that infiltration is appropriate. §§ 102.8(f)(8), 102.8(g)(1) & 102.8(g)(2)

i. The following technical deficiencies are associated with Appendix S.7:

i. Complete PCSM Standard Worksheet #2, by identifying if there are or are not mapped existing natural sensitive resources. § 102.8(g)(1)

ii. PCSM Standard Worksheet #4 identifies a Managed Area of 1.037 acres; however, an area of 4.879 acres is analyzed. Clarify this discrepancy. §§ 102.8(f)(8) & 102.8(g)(2)

iii. Utilize the latest version of the PCSM Standard Worksheets #5. How was the volume to be permanently reduced of 256 cf calculated for the MLV Pad? §§ 102.8(f)(8), 102.8(f)(15) & 102.8(g)(2)

iv. PCSM Standard Worksheet #10: If the proposed vegetated swale is designed to be utilized with a water quality function (in addition to volume reduction), then design the PCSM BMP in accordance with the recommendations of the PCSM Manual (1-3% longitudinal slope) or provide the appropriate information related to the alternative BMP and design standards. Ensure that all required plan information related to the minimize soil compaction and re-vegetated/re-forest disturbed areas is provided on the PCSM Plan drawings (e.g. seeding mix, long-term operation and maintenance schedule, construction sequence, etc.). §§ 102.8(f)(6), 102.8(f)(7), 102.8(f)(9), 102.8(f)(10), 102.8(g)(2), 102.11(a)(2) & 102.11(b)

v. Identify why PCSM Standard Worksheet #11 has been provided. PCSM Standard Worksheet #11 is to only be provided if the volume reduction cannot be met. § 102.8(f)(15)

j. Provide dewatering calculations for all of the PCSM BMPs. § 102.8(f)(8)

24. The narrative in Appendix T identifies AR-LA-026.4 as a temporary access road. However, the table from Page 5 of the main narrative and the location map in Appendix T identify the access road as permanent. Clarify this discrepancy and make all revisions necessary. If this is a permanent access road, then provide all necessary information related to the post construction stormwater management for this permanent access road. §§ 102.8 & 102.8(f)(3)