25. The location map in Appendix T identifies AR-LA-027.5, which appears to be an access road (based upon the naming convention). However, there does not appear to be anything proposed for the area identified on the location map. Clarify this discrepancy. § 102.8(f)(3)

26. For temporary access road AS-LA-027.1 (Appendix U), the narrative identifies the Watershed as Chickies Creek; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Chickies Creek. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

27. For temporary access road AS-LA-028.1 (Appendix V), the narrative identifies the Watershed as Black Run; however, PCSM Standard Worksheet #1 identifies the receiving surface water as Back Run. Based upon the information in the Joint Permit application, the receiving surface water would be an UNT to Back Run. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

28. The following technical deficiencies are associated with Appendix W:

    a. The narrative identifies the Watershed as Chickies Creek; however, PCSM Standard Worksheet #1 (in Appendix W.7) identifies the receiving surface water as an UNT to Chickies 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-029.3 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)

e. Identify how the proposed impervious loading ratio for the MLV Pad was calculated. It appears that the pad has a footprint of 2,500 SF (2,000 CF storage at elevation 514.5 multiplied by the void ratio of 40% results in 5,000 CF; then divided by 2-ft. depth results in a surface area of 2,500 SF). The impervious area to the pad is identified as 4,680 SF, which should result in an impervious loading ratio of 1.9:1 (while the total loading ratio should be 5.4:1). Clarify this discrepancy. § 102.8(f)(8)

f. 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)

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

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

   ii. 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)

   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 W.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)

i. The following technical deficiencies are associated with Appendix W.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 1.0 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)

j. The following technical deficiencies are associated with Appendix W.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 2,000 cf calculated for the MLV Pad (as the hydrograph routing calculations identify a used storage volume of 1,532 cf for the 2-year/24-hour storm event)? §§ 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)

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

29. For temporary access road AS-LA-030 (Appendix X), the narrative identifies the Watershed as Little Chickens Creek; however, PCSM Standard Worksheet #1 identifies the receiving surface water as Shells Run. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

30. For temporary access road AS-LE-033.1 (Appendix Y), the narrative identifies the Watershed as Little Chickies Creek; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Shells Run. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

Post Construction Stormwater Management Plan Narrative – River Road Regulator Station

1. The first sentence of the third paragraph on Page 1 identifies that there is a proposed increase of 1.49 acres of gravel area. However, the calculations (e.g. PCSM Standard Worksheet #4) identify an increase of only 1.20 acres of gravel area. Clarify this discrepancy and make all revisions necessary to consistently identify the proposed increase in gravel area. §§ 102.8(f)(3), 102,8(f)(4), 102.8(f)(8), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

2. The third sentence of the third paragraph on Page 1 identifies that the Post Construction Stormwater Management (PCSM) and Site Restoration (SR) best management practices (BMPs) are designed in accordance with the E&S Manual. This is not adequate, as the PCSM BMPs should be designed in accordance with PCSM Manual or an alternative BMP and design standard demonstration should be made. Revise the design or the PCSM/SR BMPs or provide the alternative demonstration. Make all revisions necessary. §§ 102.8(f), 102.11(a)(2) & 102.11(b)

3. The fourth sentence of the third paragraph on Page 1 identifies to what standard the practices were designed. However, design the PCSM Plan to meet all the regulatory requirements in 25 Pa. Code § 102.8(b). Ensure that the PCSM Plan clearly demonstrates how all Sub-Sections of 25 Pa. Code § 102.8(b) are being met.

4. The first sentence of the first paragraph on Page 8 uses the abbreviation of 'MLVs'; however, this abbreviation has not be identified. In the PCSM Plan identify what MLVs is an abbreviation for (e.g. "New full abbreviated term (MLVs) will be wholly…"). § 102.8(f)(3)

5. The last sentence of the last paragraph on Page 8 refers to "erosion control design"; however, this is the PCSM Plan. The E&S Plan should be separate from the PCSM Plan and vice-versa. Make all revisions necessary to separate the E&S Plan from the PCSM Plan. §§ 102.4(b)(5)(xiv) & 102.8(d)

6. Section 1.3 does not adequately identify the past land uses of the site. It is recommended to identify the historic land use of the site (5 to 50 years ago) and the existing land use of the site (0 to 5 years ago). § 102.8(f)(3)

7. The second sentence of the second paragraph of Section 1.4 on Page 9 identifies 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.

8. 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 first paragraph of Section 1.4 on Page 9: "...50-, and 100-year/**24-hour** storm events..."). §§ 102.8(g)(2) & 102.8(g)(3)

9. The third sentence of the second paragraph of Section 1.4 on Page 9 identifies a "Water Quality Worksheet #4". Identify what Worksheet this is, as DEP does not have a worksheet titled Water Quality Worksheet #4. If this is referring to 'Worksheet 4. Change in Runoff Volume for 2-YR Storm Event', then it is recommend to identify it as 'PCSM Standard Worksheet #4'. § 102.8(f)(15)

10. The first sentence of the first paragraph on Page 10 identifies that "The Site is not located within a current PADEP approved Act 167 Stormwater Management Watershed Plan". However, 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 to appropriately identify the site. § 102.8(f)(15)

11. The last sentence of Section 1.5 on Page 10 identifies that impairment are listed in a "PADEP Chapter 93 Integrated List". However, this is not correct. Stream impairments and TDMLs are identified in the '2014 Pennsylvania Integrated Water Quality Monitoring and Assessment Report'. Make all revisions necessary. § 102.8(f)(15)

    Please note that the receiving surface water of Fishing Creek is tentatively impaired for agriculture – siltation and habitat modification – other habitat alterations. If the receiving surface water is identified as impaired in the 2016 Pennsylvania Integrated Water Quality Monitoring and Assessment Report before permit coverage is authorized for the project, then revise the application accordingly.

12. Page 11 identifies an Infiltration Bed as a PCSM BMP; however, in the discussion of said

BMP, it is described as a subsurface detention facility. Ensure that each PCSM BMP is described and identified consistently throughout the application. §§ 102.8(f)(3) & 102.8(f)(6)

13. Page 11 identifies separate PCSM BMPs of Bioretention Basin, Minimize Soil Compaction in Disturbed Areas and Soil Amendment and Restoration. Based upon the PCSM Plan drawings for the River Road Regulator Station, the same area is utilized for all of these PCSM BMPs. Minimizing soil compaction and soil amendments are inherent to bioretention basins; therefore, separate post construction stormwater management credit cannot be taken for minimize soil compaction and soil amendments that occur as part of the bioretention basin. Make all revisions necessary to the calculations, PCSM Plan and NOI. §§ 102.8(f)(3), 102.8(f)(6), 102.8(f)(8), 102.8(f)(9), 102.8(g)(2) & 102.8(g)(4)

14. Revise step No. 2 in the sequence to identify all parties that are required attend the Preconstruction Meeting. The Permittee(s), co-permittees, operators, and licensed professionals or designees responsible for the earth disturbance activity, including implementation of E&S and PCSM Plans and critical stages of implementation of the approved PCSM Plan, are required to attend the preconstruction meeting. Make all revisions necessary (including within the E&S Plans and all other documents in the ESCGP-2 application). §§ 102.4(b)(5)(vii), 102.5(e) & 102.8(f)(7)

15. The following technical deficiencies are associated with the long-term operation and maintenance schedule identified in Section 1.10: § 102.8(f)(10)

    a. It appears that the first sentence of the Monitoring section, which identifies inspections on an annual basis, conflicts with the inspections schedule identified for the BMPs in the Maintenance section. Provide a clear and appropriate inspection schedule for any and all PCSM BMPs.

    b. The provided long-term operation and maintenance schedule for the PCSM BMPs is not sufficient. Provide a long-term operation and maintenance schedule which provides for inspection of the PCSM BMPs, including the repair, replacement, or other routine maintenance of the PCSM BMPs to ensure proper function and operation. If an item is identified for inspection; 1) identify the inspection schedule/times, 2) identify the 'trigger' for repair, replacement and other routine maintenance and 3) identify the repair, replacement and other routing maintenance. For BMPs which are required to dewater (e.g. infiltration BMP), include an inspection to ensure that the BMP is properly dewatered, and identify the designed dewatering time in the long-term operation and maintenance schedule (not the recommended maximum dewatering time of 72 hours from the PCSM Manual). The PCSM Manual recommends collecting grass clippings and disposing of them in a local compost facility for vegetated swales which will be used as a PCSM BMP; the long-term operation and maintenance should include this or provide the

alternative demonstration. Make all revisions necessary. §§ 102.11(a)(2) & 102.11(b)

c. The long-term operation and maintenance schedule should provide for completion of a written report documenting each inspection and all BMP repair and maintenance activities and how access to the PCSM BMPs will be provided.

d. Revise No. 10 of Section 1.10 on Page 17 to include the regulatory requirements for long-term operation and maintenance.

16. 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)

17. The first two sentences of Section 1.12 on Page 21 contradict each other. The first sentence says "There are not naturally occurring geologic formations that may have the potential to cause pollution...", but the next sentence identifies that "...acid runoff producing soils may exist...". 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 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)? Perform and supply an adequate predevelopment site characterization and assessment of soil and geology. §§ 102.8(f)(12) & 102.8(g)(1)

    If the potential to cause pollution is at the site, due to naturally occurring geologic formations or soil conditions, develop a management plan, which is part of the PCSM Plan, which avoids or minimizes potential pollution and its impacts. § 102.8(f)(12)

18. Section 1.13 on Page 22 appears to be a thermal impact analysis 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. Make the thermal impact analysis specific for the River Road Regulator Station in the PCSM Plan for said regulator station. § 102.8(f)(13)

19. Section 1.15 is not an adequate antidegradation analysis. Make the antidegradation analysis specific to the site for which the PCSM Plan covers (i.e. River Road Regulator Station). Make sure the analysis evaluates and includes 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)

20. The following technical deficiencies are associated with information provided in Appendix A:

    a. It is not clear from the narrative discussion and from the calculations how the Rock Spring Expansion Project is factored into the post construction stormwater management calculations. Is it an existing facility, and therefore accounted for in the pre-development calculations? If so, then include any existing stormwater management facilities for the Rock Spring Expansion in the pre-development analysis. Provide more information as to how the Rock Spring Expansion Project is accounted for in the post construction stormwater management analysis for the Atlantic Sunrise Project – CPL North, CPL South and Associated Facilities (specifically the River Road Regulator Station). §§ 102.8(f)(3), 102.8(f)(8), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

    b. The drainage area 'DA to subsurface infiltration' utilized an assumed Time of Concentration (Tc) of 5 minutes. The drainage area size is 1.133 acres, which appears to be too large to utilize an assumed Tc. Provide Tc calculations for this drainage area or provide proper justification for utilizing an assumed Tc.). §§ 102.8(f)(8), 102.8(f)(15), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

    c. The channel design calculations utilize a side slope of 2:1; however, the vegetated swale reach routing utilized a side slope of 3:1. Clarify this discrepancy, and make all revisions necessary to consistently identify the design of the proposed vegetated swale. §§ 102.8(f)(8), 102.8(f)(15), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

    d. Provide more information as to how the volume (term 'V') was calculated in the River Road Regulator Station Vegetated Swale Infiltration Volume calculations. §§ 102.8(f)(8), 102.8(g)(2), & 102.8(g)(4)

    e. Provide the calculations for sizing of the anti-seep collar. § 102.8(f)(8)

    f. Provide more information as to how the proposed level spreader was designed (e.g. what is the design criteria/how was the length of the level spreader calculated). §§ 102.8(f)(6) & 102.8(f)(8)

    g. Based upon the PCSM Plan drawings, it appears that a significant portion of the existing site is wooded. However, woodlands are not identified on PCSM Standard Worksheet #2. Clarify this discrepancy, and make all revisions necessary to provide an accurate predevelopment site characterization. § 102.8(g)(1)

    h. The following technical deficiencies are associated with PCSM Standard Worksheet #4:

i. The cover type areas do not match the cover type areas in the Predevelopment hydrographs. Clarify this discrepancy, and make all revisions necessary. §§ 102.8(f)(8), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

ii. It does not appear that 20% of the existing impervious area to be disturbed is considered in meadow good condition. Clarify if the regulatory required assumption has been made. Provide a clear identification as such, and make all revisions necessary. § 102.8(g)(2)(ii)

i. The following technical deficiencies are associated with PCSM Standard Worksheet #5:

i. Utilize the latest version of the PCSM Standard Worksheets. § 102.8(f)(15)

ii. Provide the calculations to show how the proposed infiltration bed and bioretention basin will permanently reduce 3,271 cf and 1,319 cf, respectively, during the 2-year/24-hour storm event. §§ 102.8(f)(8), 102.8(g)(2) & 102.8(g)(4)

j. Revise PCSM Standard Worksheet #10 based upon the previously identified technical deficiencies (i.e. minimize soil compaction and soil amendment/restoration). 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. §§ 102.8(f)(6), 102.8(g)(2), 102.11(a)(2) & 102.11(b)

k. 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)

l. The following technical deficiencies are associated with the predevelopment site characterization and assessment of soil and geology:

i. Redoximorphic (redox) features can be an indication of a regularly occurring seasonally high water table. The provided testing identifies redox features occurring starting at zero inches (for Test Pits 1, 2, 3, 3A & 8). However, infiltration is proposed within the identified redox features. Protocol 2.1.a of Appendix C of the PCSM Manual recommends a minimum separation of at least 2-feet above a regularly occurring seasonally high water table. Revise the design to be consistent with the recommendations of the PCSM Manual or provide the appropriate information related to the alternative BMP and design standards. §§ 91.51(a), 102.8(f)(6), 102.8(f)(15), 102.11(a)(2) & 102.11(b)

ii. Identify what type of testing methodology was utilized for the infiltration testing. § 102.8(g)(1)

iii. Identify and provide more information related to the 'bentonite soak'/'bentonite presoak'. §§ 102.8(f)(15) & 102.8(g)(1)

m. The raw/tested infiltration rate is 40.5 in./hr. and the adjusted (with a Safety Factor of 3) infiltration rate is 13.5 in./hr. 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. No discussion could be located related to the excessive infiltration rates. Revise the design to be consistent with the recommendations of the PCSM Manual or provide the appropriate information related to the alternative BMP and design standards. §§ 91.51(a), 102.8(f)(6), 102.8(f)(15), 102.11(a)(2) & 102.11(b)

n. Why are the redox features not identified as a limiting zone for infiltration in the Infiltration Rate/Dewatering Time narrative? § 102.8(g)(1)

o. The dewatering calculations could not be located in the Infiltration Rate/Dewatering Time narrative. Provide these calculations. § 102.8(f)(8)

p. The Infiltration Rate/Dewatering Time narrative identifies that rock removal may be required to provide the recommended 2-ft. separation to bedrock (from Protocol 2.1.b in Appendix C of the PCSM Manual). What investigation has been done to ensure that the underlying bedrock has the ability to infiltrate the post construction stormwater? § 102.8(g)(1)

q. The following technical deficiencies are associated with the Infiltration Loading Ratio calculations and narrative:

i. The provided narrative asserts that the bioretention basin, the underground infiltration bed and the vegetated swales are in a connected configuration. However, DEP does not agree with that statement. The bioretention basin has a 100-year/24-hour routed water surface elevation of 609.98, while the invert out of the outfall pipe for the underground infiltration bed is at 613.00. Because of the disconnection between the three BMPs, they will function independently of each other and as a result should be analyzed separately for loading ratios. Provide separate loading ratios for the underground infiltration bed, the bioretention basin and the vegetated swale check dams. § 102.8(f)(8)

ii. The provided alternative BMP and design standard demonstration is not sufficient.

Additional information is required to demonstrate how the infiltration bed and bioretention basin have been maximized. It appears that the word 'grated' is mispelled word in the last sentence of the fourth point of the Analysis. 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)

21. The plan preparer qualifications in Appendix B 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)

Erosion and Sediment Control and Layout Plans Drawings – 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. Drawing No. 24-1600-70-28-A/LL113_9 Sheet 2 of 4, identifies an access road named AR-LA-018;however, there is no additional information provided related to this location (it is not identified in the table on Page 5 of the narrative). The plan drawing identifies AR-LA-029.2; however, it appears that this should be labeled "AR-LA-029.3". Clarify these discrepancies and make all revisions necessary. §§ 102.8(f)(3) & 102.8(f)(9)

3. Make the Notes provided on Drawing No. 24-1600-70-28-A/LL113_9-AR-LA-002 Sheet 3 of 3 specific for that particular location. Make all revisions necessary to correct this deficiency throughout the application documents. § 102.8(f)(9)

4. Drawing No. 24-1600-70-28-A/LL113_9-AR-LA-010.2 Sheet 1 of 3 identifies grading required for the centerline of the access road; however, the proposed grading is not shown in the plan view. Show the proposed grading for the temporary and permanent access roads on the plan view for each location. Make all revisions necessary to correct this deficiency throughout the application documents. §§ 102.8(f)(3) & 102.8(f)(9)

5. Identify and show the test pit locations on Drawing No. 24-1600-70-28-A/LL113_9-AR-LA-010.2 Sheet 3 of 3. Make all revisions necessary to correct this deficiency throughout the application documents. §§ 102.8(f)(3), 102.8(f)(9) & 102.8(g)(1)

6. Identify where the site/location specific notes and details for the PCSM Plan are to be found. Provide the regulatory required information for all PCSM BMPs claimed for the specific

site/location. Make all revisions necessary to correct this deficiency throughout the application documents. §§ 102.8(f)(6),102.8(f)(7), 102.8(f)(9) & 102.8(f)(10)

Post Construction Stormwater Management Plan Drawings – River Road Regulator Station

1. The following technical deficiencies are associated with Sheet 3 of 7: § 102.8(f)(9)

   a. It appears very steep cut slopes are proposed for the south and west sides of the regulator station. However, no information could be found in the PCSM Plan narrative which demonstrates that these steep slopes will remain stable in the post development condition. Provide a demonstration that the slopes will remain stable. § 102.8(f)(8)

   b. The Test Pits are identified on the plan view; however, the level of detail provided is not sufficient to identify the different locations for Test Pit 2 versus 2A and Test Pit 3 versus 3A. Clearly identify where Test Pits 2A and 3A were performed.

   c. A soil limitation of high water table was identified in the PCSM Plan narrative; however, there does not appear to be any investigation performed for the area of the largest proposed cut (approx. 11-ft.) at the south side of the regulator station. What investigation has been performed to ensure that groundwater is not encountered in this area? § 102.8(g)(1)

   d. There does not appear to be any predevelopment site characterization and assessment of soil and geology for the vegetated swale check dams. How was this area investigated to ensure that infiltration is possible and appropriate? § 102.8(g)(1)

   e. Clearly identify the proposed tree line on the plan.

2. The following technical deficiencies are associated with Sheet 4 of 7: § 102.8(f)(9)

   b. It appears that end of the last sentence in the third paragraph of the PCSM Long Term Operations and Maintenance Requirements notes in the PCSM Standard Notes was cut off. § 102.8(f)(10)

   c. The Recycling and Disposal of Materials notes do not address materials with or from the PCSM BMPs. Ensure that the proper regulatory citation is provided. § 102.8(f)(11)

   d. The responsible party identified in the Responsible Party notes is different from the responsible party identified in the PCSM Standard Notes. Consistently identify the responsible party for the long-term operation and maintenance of the PCSM BMPs. § 102.8(f)(10)

e. The provided long-term operation and maintenance schedule is not sufficient. Refer to the previous technical deficiency concerning the long-term operation and maintenance schedule. § 102.8(f)(10)

f. The following technical deficiencies are associated with the Soil Amendment Notes:

i. Note No. 1 identifies that the contractor shall ensure than an infiltration rate of 2.0 in./hr. is achieved by the soil amendments. However, the design infiltrate utilized in the calculations is 2.5 in./hr. Utilizing the applied Safety Factor of 3, the soil amendments should achieve an infiltration rate of 7.5 in./hr. Make all revisions necessary. §§ 102.8(f)(6), 102.8(f)(7), 102.8(f)(15) & 102.8(g)(2)

ii. Make the testing of the soil amendments a critical stage of PCSM BMP implementation. Make the notes identify how the soils will be tested, how often the testing will be performed and how to correct the soil amendments should they not achieve the identified infiltration rate. §§ 102.8(f)(6), 102.8(f)(7) & 102.8(f)(15)

iii. Note No. 2 is too vague related to determining when the filter fabric barrier is to be placed. Identify, in more definitive terms, when the filter fabric barrier is to be placed. It appears that this determination would be a critical stage of construction and should be included as such. §§ 102.8(f)(6), 102.8(f)(7) & 102.8(f)(15)

iv. The soil mixture ratio appears to be too high in Note No. 3. The PCSM Manual recommends a maximum of 30% organic matter (compost) to 70% soil base (topsoil). Revise the design to be consistent with the recommendations of the PCSM Manual or provide the appropriate information related to the alternative BMP and design standards. §§ 102.8(f)(6), 102.11(a)(2) & 102.11(b)

v. It appears that the word "in-sity" is a typographical error. Clarify and revise as necessary.

vi. Note No. 7 appears to identify two different types of seed mixtures for the bioretention basin. Will two different seed types be provided? If not, identify in the PCSM Plan which type of seed mixture will be utilized. § 102.8(d)

3. There are numerous seed mixes provided on Sheet 5 of 7. Identify in the PCSM Plan only the design seed mixes for use on the site (the River Road Regulator Station), and clearly label/identify where the seed mix(es) will be applied. §§ 102.8(d) & 102.8(f)(9)

4. The following technical deficiencies are associated with Sheet 6 of 7: § 102.8(f)(9)

a. The Thermal Impact Analysis does not match the Thermal Impacts discussion from the PCSM Plan Narrative. Provide consistency between the PCSM Plan drawings and narrative. DEP recommends only providing one thermal impact analysis (in the PCSM Plan narrative) to avoid confusion and potential for discrepancies. § 102.8(f)(11)

b. Critical Stages of Construction No. 3 identifies infiltration berms; however, it does not appear that infiltration berms are proposed for the River Road Regulator Station. Clarify this discrepancy. §§ 102.8(f)(6) & 102.8(f)(7)

c. A Stilling Basin Detail is provided. Provide the stilling basin sizing calculations in the PCSM Plan narrative. § 102.8(f)(8)

d. It appears that the pipe's thickness is not accounted for in the sizing of the anti-seep collar. Based upon the design the anti-seep collar should have a 7-in. projection; the anti-seep collar width should be 30 inches (7-in. projection + 2-in. pipe thickness + 12-in. diameter + 2-in. pipe thickness + 7-in. projection). Make all revision necessary.

e. The Basin Emergency Spillway With TRM Lining detail identifies a spillway width ('Ww') of 10-ft.; however, the routing calculations identify a width of 160-ft. Clarify this discrepancy and make all revisions necessary. §§ 102.8(f)(6) & 102.8(f)(8)

f. A Permanent Outlet Structure Trash Rack detail is provided. Clarify where the trash rack is to be installed.

5. The following technical deficiencies are associated with Sheet 7 of 7: § 102.8(f)(9)

   a. The following technical deficiencies are associated with the Level Spreader Detail: § 102.8(f)(6)

      i. Provide discussion as to why there is no geotextile fabric provided along the bottom and side of the R-3 riprap. § 102.8(f)(15)

      ii. The detail has a dimension identified as 'Extend to Frost Line'. Identify in the detail the required dimension for the site. § 102.8(d)

   b. The following technical deficiencies are related to the Plan View Subsurface Infiltration Facility and the Subsurface Infiltration Facility Cross Section A-A: § 102.8(f)(6)

      i. The details identify 6 runs of 12-in. perforated pipe at 100 LF and 3 runs of 24-in. perforated pipe at 144 LF; however, the calculations identify 5 runs of 12-in.

perforated pipe at 100 LF and 3 runs of 24-in. perforated pipe at 140 LF. Clarify this discrepancy and make all revisions necessary. §§ 102.8(f)(8), 102.8(g)(2), 102.8(g)(3) & 102.8(g)(4)

ii. It appears that the underground facility will rely upon manufactured couplings to be constructed. Identify all of the required couplings, fitting, etc.

iii. What do the dashed lines in the Plan View Subsurface Infiltration Facility represent?

iv. Provide additional information related to the stone bed, so that the identified area can be verified as consistent with the calculations.

v. Better identify the proposed inverts for the perforated pipes in the Subsurface Infiltration Facility Cross Section A-A.

6. The construction sequence for the individual PCSM BMPs could not be located. Provide individual construction sequences for each PCSM BMP. § 102.8(f)(7)

7. The PCSM Plan 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)

8. The Infiltration Rate/Dewatering Time calculations and discussion in Appendix A of the PCSM Plan narrative identify that rock removal may be required to provide the recommended 2-ft. separation to bedrock (from Protocol 2.1.b in Appendix C of the PCSM Manual); however, this rock removal is not identified in the PCSM Plan drawings. Provide adequate plan information related to the rock removal; including, but not limited to, how to identify if rock removal is require, how to remove said rock, what material will be backfilled, how to back fill said material, etc. §§ 102.8(f)(6), 102.8(f)(9) & 102.8(f)(15)

9. A detail for a concrete cradle could not be located. The E&S Manual (on Page 160) recommends the use of concrete cradle for outlet barrels for permanent basins. Provide a demonstration that the proposed alternative of no concrete cradle is just as effective as a concrete cradle. §§ 102.8(f)(6), 102.8(f)(9), 102.8(g)(5), 102.11(a)(1) & 102.11(b)

10. It appears that infiltrated stormwater has the potential to seep into the bioretention basin from the underground infiltration facility. Provide phreatic calculations for the infiltrated stormwater in the underground infiltration facility. § 102.8(f)(8)

Lebanon 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 PCSM design and the impairment and/or TMDL. § 102.8(f)(5)

4. Identify in the table on Page 6 the receiving surface water, the Designated and Existing Uses and if the receiving surface water is impaired or has a TMDL. The table identifies LE-057.1 with italicized text; is there any significance to this? The table identifies LE-041 and LE-059; however, these roads are not included in the Appendices or on the plan drawings. Clarify this discrepancy. §§ 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 of Section 1.3 on Page 10. § 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 14). §§ 102.8(g)(2) & 102.8(g)(3)

7. The third paragraph on Page 14 is very confusing related to the Act 167 Plans. Clearly identify to what criteria the PCSM Plan was designed to. It appears that the project's location is not within the area covered by the approved Act 167 Plan for a portion of Lebanon County. Make the narrative specific for the project and project site. 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 27 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 28 "...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). Evaluate and include in the analysis 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. For temporary access road AS-LE-033.1 (Appendix E), the narrative identifies the Watershed as Little Chickies Creek; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Shells Run. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

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

    a. The narrative identifies the Watershed as Gingrich Run; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Gingrich 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-021 in Appendix P. Provide the all necessary information related to the post construction stormwater management for this permanent access road. § 102.8

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

    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. The narrative identifies that 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. If infiltration is proposed for the design, then perform an adequate predevelopment site characterization and assessment of soil and geology. § 102.8(g)(1)

d. Permanent access road AR-LE-037.1 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 plan drawings, it appears that the MLV Pad's drainage area includes area other than just the gravel pad. Clarify this discrepancy. Ensure that the loading ratio calculations are all correct and account for all tributary drainage area. If diversions will be used in post construction conditions, then clearly label these diversions on the plans. §§ 102.8(f)(8) & 102.8(f)(9)

f. The following technical deficiencies are associated with Appendix G.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 Meadow Lane, 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 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)

   v. 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 G.4:

   i. Provide more legible contour information, including contour labels, and 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 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. How was the Subreach Volume calculated in Appendix G.6? Provide the equation that is utilized. § 102.8(f)(8)

i. The following technical deficiencies are associated with Appendix G.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 1.1 acres; however, an area of 1.49 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 593 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)

20. For temporary access road AS-LE-038 (Appendix H), the narrative identifies the Watershed as Quittapahilla Creek; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Quittapahilla Creek. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

21. The following technical deficiencies are associated with Appendix L:

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

22. The following technical deficiencies are associated with Appendix L:

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

23. For temporary access road AS-LE-047 (Appendix N), the narrative identifies the Watershed as Swatara Creek; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Swatara Creek. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

24. For temporary access road AS-LE-049 (Appendix O), the narrative identifies the Watershed as Swatara Creek; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Swatara Creek. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

25. For temporary access road AS-LE-050 (Appendix P), the narrative identifies the Watershed as Swatara Creek; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Qureg Run. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

26. The following technical deficiencies are associated with Appendix Q:

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

    b. The narrative identifies that 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. If infiltration is proposed for the design, then perform an adequate predevelopment site characterization and assessment of soil and geology. § 102.8(g)(1)

c. 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)

d. 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.

e. Permanent access road AR-LE-050.1.1 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)

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

   i. The following technical deficiencies are associated with the drainage area map: §§ 102.8(f)(8) & 102.8(f)(9)

      1. Provide additional contour labels.

      2. The drainage area map identifies a Curve Number of 79; however, the calculations identify a Curve Number of 72. Clarify this discrepancy. §§ 102.8(f)(8), 102.8(g)(3) & 102.8(g)(4)

      3. The Time of Concentration identified on the plan view does not match the legend.

      4. Identify what the inner delineated drainage area represents.

      5. Identify what the dimensions are for.

   ii. 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 Q.4:

   i. Provide contour labels with the drainage area map. § 102.8(f)(9)

   ii. 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 Q.5:

   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 0.92 acres; however, an area of only 0.65 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 2,528 cf calculated for the MLV Pad? §§ 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)

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

j. It appears that based upon the grading around the MLV Pad shown on the plan drawings that concentrated flow will result. Provide stability calculations for this area of concentrated flow. Provide calculations which demonstrate that the flow depth does not result in drainage area contributing to the MLV Pad BMP. § 102.8(f)(8)

27. The following technical deficiencies are associated with Appendix R:

    a. The narrative identifies the Watershed as Forge Creek; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Forge Creek. Clearly and consistently identify the receiving surface water. It appears that Forge Creek and an UNT to Forge Creek are the receiving surface waters for this site/location. § 102.8(f)(5)

    b. The Location Map does not properly identify Forge Creek (it is identified as an UNT to Forge Creek). Properly identify the receiving surface waters. § 102.8(f)(5)

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

    a. There appears to be no discussion or stormwater management analysis for the permanent access road. Provide the all necessary information related to the post construction stormwater management for this permanent access road. § 102.8

29. The following technical deficiencies are associated with Appendices T & U:

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

30. The following technical deficiencies are associated with Appendix V:

    a. The narrative identifies the Watershed as Swatara Creek; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Swatara Creek. 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. Provide the all necessary information related to the post construction stormwater management for this permanent access road. § 102.8

31. The following technical deficiencies are associated with Appendix W:

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

32. The following technical deficiencies are associated with Appendix X:

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

33. The following technical deficiencies are associated with Appendix Y:

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

d. The narrative identifies that access road as temporary; however, the overall table on Page 6 of the main narrative identifies the access road as permanent. Clarify this discrepancy. § 102.8(f)(3)

e. There appears to be no discussion or stormwater management analysis for the permanent access road. Provide the all necessary information related to the post construction stormwater management for this permanent access road. § 102.8

34. For temporary access road AS-LE-059.1 (Appendix Z), the narrative identifies the Watershed as Swatara Creek; however, PCSM Standard Worksheet #1 identifies the receiving surface water as an UNT to Swatara Creek. Clearly and consistently identify the receiving surface water. § 102.8(f)(5)

35. The following technical deficiencies are associated with Appendix AA:

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

Luzerne County

1. AR-LU-007.1:
   a. Please provide the operation and maintenance procedures for main line valve pad. § 102.8(f)(10)

   b. Please provide information on what procedures will be taken should the soil become compacted during construction compacted during construction of the main line valve pad. § 102.8(f)(8)

   c. Please provide the infiltration period (draw down time) for the proposed infiltration BMP. § 102.8(f)(8)

2. AR-LU-009.1 – Please provide all necessary calculations for the proposed volume and water quality BMPs. § 102.8(f)(8)

3. North Diamond Regulator Station:

   a. Since it is designed to meet the Luzerne County Act 167 Stormwater Management Plan, please provide a consistency letter or the Luzerne County Act 167 Stormwater Management Plan for it to be reviewed accordingly. § 102.8(g)(2)

   b. 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. It appears this has occurred with the rain garden and the soil amendments BMPs. Please review these BMPs and revise all documentation as applicable. § 102.8(f)(6), § 102.8(f)(8), § 102.8(f)(9)

   c. The calculations show that there will be an increase in volume from the existing to proposed conditions. Please provide an analysis as to why the total volume increase cannot be mitigated through the use of other volume control BMPs. § 102.8(f)(8)

   d. Please provide the calculations for the proposed check dams. § 102.8(f)(8)

   e. Please provide details for the proposed check dams. The details should include all elevations, dimensions, sizes, depths, slopes, materials, products, cross sections, notations for construction and any other applicable information necessary to construct this BMP. § 102.8(f)(9)

   f. 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 BMP. § 102.8(f)(8)

Susquehanna County

1. TAR AR-SU-044 – Please show the proposed contours for the roadway on the Plans and Profile details. § 102.8(f)(9)

2. AR-SC-063:

   a. 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)

b. Please provide the following notations on the PCSM plan: § 102.8(f)(9)

   i. The protected area should be located, delineated and labeled on the PCSM plan.

   ii. The protected area should not be subject to grading or movement of existing soils.

   iii. The protected area should not allow existing native vegetation to be removed.

   iv. Pruning or other required maintenance of vegetation is allowed in the protected area.

   v. Additional planting of native vegetation in the protected area is allowed.

   vi. The protected areas should be clearly delineated in the field and protected prior to construction activities taking place.

   vii. Should the protected areas become compacted or disturbed during construction, soils amendment and restoration may be required.

3. There are two main line valve sites that are proposed for this project in Schuylkill County; however there are not any Plans or calculations provided for the sites. Please provide all necessary information regarding these sites. § 102.8(f)

4. AR-SC—73.5-The loading ratios for the proposed check dams exceed the maximum. Please provide information on how water quality will be maintained with the loading ratios being exceeded. § 102.8(f)(8)

Wyoming County

1. AR-WY-028:

   a. Please provide the calculations for the swale and check dams. § 102.8(f)(8)

   b. The proposed PCSM BMP "Stone Pad Void Storage" must have an operation and

maintenance procedures to ensure that the BMP will function properly over the life of the project. § 102.8(f)(10)

c. 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 these BMPs and revise all documentation as applicable. § 102.8(f)(6), § 102.8(f)(8), § 102.8(f)(9)

d. Please provide the infiltration period (draw down time) for the proposed infiltration BMP§ 102.8(f)(8)

2. Compression Station 605

a. Please provide a cross section for Basin 2. § 102.8(f)(9)

b. Please provide the infiltration period (draw down time) for the proposed infiltration BMP§ 102.8(f)(8)

c. Please show the impoundment for all infiltration BMPs (Berms 1 and 2). § 102.8(f)(9)

d. Please provide the anti-seep collar for the basin along with all applicable calculations in the PCSM report and details on the PCSM plans. § 102.8(f)(8), § 102.8(f)(9)

e. 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 and the infiltration basins. § 102.8(f)(8)

f. Separate worksheets must be submitted for each watershed within the project boundaries. 102.8(f)(4)

g. 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. This appears to be the case with the infiltration berms and infiltration basins. Please review these BMPs and revise all documentation as applicable. § 102.8(f)(6), § 102.8(f)(8), § 102.8(f)(9)

3. Meter Station in Wyoming County

a. 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 BMP. § 102.8(f)(8)

b. The 100-year water surface elevation is higher than the emergency spillway elevation for the proposed basin. Please be advised that there should be a minimum of 6 inches between the 100-year water surface elevation and the emergency spillway crest elevation. § 102.8(f)(8)

c. Please show the proposed disconnection areas on the PCSM Plans. § 102.8(f)(9)

Pursuant to 25 Pa. Code § 102.6(c) of DEP's rules and regulations, you must submit a response fully addressing each of the significant technical deficiencies set forth above. Please note that this information must be received within sixty (60) calendar days from the date of this letter, on or before September 27, 2016 or DEP may consider the application to be withdrawn by the applicant.

You may request a time extension in writing before September 27, 2016 to respond to deficiencies beyond the sixty (60) calendar days. Requests for time extensions will be received by DEP and considered. You will be notified in writing of the decision either to grant or deny, including a specific due date to respond if the extension is granted. Time extensions should be in accordance with 25 Pa. Code § 102.6(c).

Please submit one (1) copy of the revised E&S/SR and PCSM Plan drawings & narratives to all of the County Conservation Districts, one (1) copy of the revised E&S/SR and PCSM Plan drawings & narratives to Mr. Mark Lonergan at DEP's Reading District Office at 1005 Cross Roads Boulevard, Reading, PA 19605 and the two (2) copies of the revised E&S/SR and PCSM Plan drawings & narratives to the DEP South-central Region at 909 Elmerton Avenue, Harrisburg, PA 17110-8200.

If you believe that any of the stated deficiencies are not significant, instead of submitting a response to that deficiency, you have the option of requesting that DEP to make a permit decision based on the information you have already provided regarding the subject matter of that deficiency. If you choose this option with regard to any deficiency, you should explain and justify how your current submission satisfies that deficiency. Please keep in mind that if you fail to respond, your application will be considered withdrawn.

Should you have any questions regarding the identified deficiencies, please contact me at the 717.705.4798, and refer to ESG0300015001, to discuss your concerns or to schedule a meeting.

The meeting must be scheduled within the 60 calendar days allotted for your reply, unless otherwise extended by DEP.

Sincerely,

Nathan R. Crawford, P.E.
Permits Section Chief
Waterways & Wetlands Program

Enclosure

cc: Mr. Alaric J. Busher, P.E., BL Companies
Columbia County Conservation District
Lancaster County Conservation District
Lebanon County Conservation District
Luzerne County Conservation District
Northumberland County Conservation District
Schuylkill County Conservation District
Wyoming County Conservation District
Cleveland, Franklin, Greenwood, Hemlock, Jackson, Montour, Mount Pleasant, Orange, Rapho & Sugarloaf Townships, Columbia County
Conestoga, Drumore, East Donegal, Eden, Manor, Martic, Pequa, Rapho & West Hempfield Townships and Mount Joy Borough, Lancaster County
Cold Springs, East Hanover, North Annville, North Lebanon, South Annville, South Londonderry, Swatara & Union Townships, Lebanon County
Dallas, Fairmont, Harveys Lake, Jenkins, Lake, Lehman & Ross Townships, Luzerne County
Coal, East Cameron & Rapho Townships, Northumberland County
Eldred, Frailey, Hegins, Pine Grove, Porter & Tremont Townships, Schuylkill County
Lenox Township, Susquehanna County
Clinton, Eaton, Falls, Monroe, Nicholson, Northmoreland & Overfield Townships, Wyoming County

bcc: Mark Lonergan, DEP RDO (pdf)
Nate Crawford (pdf)
Ed Muzic (pdf)
S. Williamson (pdf)
D. Garg, DEP NCRO (pdf)
J. Kuncelman, DEP NCRO (pdf)
J. Buczynski, DEP NERO (pdf)
B. Patel, DEP NERO (pdf)
K. White, DEP NERO (pdf)
A. Roda, DEP CO (pdf)
File
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Mr. Alaric J. Busher, P.E.
BL Companies
4242 Carlisle Pike, Suite 260
Camp Hill, PA 17011

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFF-SITE DISCHARGES OF STORMWATER TO AREAS THAT ARE NOT SURFACE WATERS

Both construction and post construction stormwater runoff is to be managed through project layout design and best management practices (BMPs) to replicate the stormwater volume, rate and quality of predevelopment conditions. Some sites, after consideration of possible project design and BMP options, do not have direct access to surface waters to discharge stormwater runoff. Applicants for National Pollutant Discharge Elimination System (NPDES) Permits for stormwater discharges associated with construction activities may propose off-site discharges of stormwater to areas that are not surface waters. In these cases, the applicant must have the legal authority to discharge stormwater onto off-site areas. The applicant must also provide documentation that the discharge will not cause accelerated erosion or stormwater damage on the adjacent properties. This documentation is required with the permit application showing that the applicant has avoided, minimized or mitigated accelerated erosion and stormwater impacts.

Off-Site Discharge Analysis for Developers

Persons proposing to discharge must have the authority to discharge through either a common law easement or an express easement. For sites that discharge to existing swales, ditches or similar structures where the new activities will not result in a change in volume or rate of stormwater runoff, the existing common law easement can be relied upon. In cases where an existing swale, ditch or similar structure is not present, an express easement will be necessary when there will be a change in volume or rate of stormwater. If an express easement is necessary, the following information should be obtained by the project applicant:

1. Obtain the names and addresses of all property owners directly receiving stormwater from the project that is not discharged to a surface water;
2. Evaluate stormwater flows (frequency and amount) onto these properties prior to the construction of the project;
3. Evaluate the nature and scope of all changes to the natural drainage characteristics for all stormwater discharged during construction and after construction is completed;
4. Evaluate the volume, rate and frequency of pre-construction, construction and post construction stormwater discharges from the project. Also evaluate the means of flow onto the adjoining properties.

This information should then be utilized by the applicant to obtain the necessary express easements to lawfully discharge the stormwater to off-site areas. If there will be an increase in stormwater to off-site areas and no express easement is obtained, the activity could be found to be a trespass which would nullify permit coverage and could subject the permittee to liability for damages in any private action pursued by adjacent landowners.

Demonstrating that no Accelerated Erosion or Damage from Stormwater will Occur

No matter what type of authorization for easements the applicant obtains for off-site discharges of stormwater, the applicant must also document that the construction and post construction stormwater discharge to areas other than surface waters will not cause accelerated erosion or damage to down slope or adjacent properties. Applicants should use guidance from the *Erosion and Sediment Pollution Control Program Manual* (363-2134-008) and the *Pennsylvania Stormwater Best Management Practices Manual* (363-0300-002) when developing the following information with their NPDES permit applications:

- On the plan drawings, identify all properties and property owners that may directly receive off-site stormwater discharges from the project site.
- On the plan drawings, identify the flow path from discharge point to the confluence with a surface water of Pennsylvania. In addition, identify the soil types, erodibility factors and vegetative cover of the flow path.
- Provide documentation that the proposed volume and rate of stormwater discharging to the flow path will not cause accelerated erosion or sedimentation and/or is consistent with the *Erosion and Sediment Pollution Control Program Manual* (363-2134-008) and the *Pennsylvania Stormwater Best Management Practices Manual* (363-0300-002).
- In the written narrative portion of the plans, provide an analysis that demonstrates how the applicant has avoided, minimized or mitigated stormwater discharges to prevent accelerated erosion or damage to the down slope or adjacent properties.

For more information, visit www.dep.state.pa.us, keyword: NPDES Construction and Erosion Control, or contact your local DEP Waterways and Wetlands program at one of the following regional offices:

WATERWAYS AND WETLANDS PROGRAM

Northwest Regional Office 230 Chestnut St. Meadville, PA 16335-3481 814-332-6984	*Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango and Warren*	**Southwest Regional Office** 400 Waterfront Dr. Pittsburgh, PA 15222-4745 412-442-4315	*Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington and Westmoreland*
North-central Regional Office 208 W. Third St., Suite 101 Williamsport, PA 17701-6448 570-327-0529	*Bradford, Cameron, Centre, Clearfield, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga and Union*	**South-central Regional Office** 909 Elmerton Ave. Harrisburg, PA 17110-8200 717-705-4802	*Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry and York*
Northeast Regional Office 2 Public Square Wilkes-Barre, PA 18701-1915 570-826-2511	*Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne and Wyoming*	**Southeast Regional Office** 2 East Main St. Norristown, PA 19401-4915 484-250-5970	*Bucks, Chester, Delaware, Montgomery and Philadelphia*

DEP Central Office
Bureau of Waterways Engineering and Wetlands
Division of NPDES Construction and Erosion Control
P.O. Box 8460
Harrisburg, PA 17105-8460
717-787-3411
Fax 717-772-0409