

January 7, 2022

Transcontinental Gas Pipe Line Company, LLC  
c/o Mr. Joseph Dean  
2800 Post Oak Blvd  
Level 11  
Houston, TX 77056

Re: Technical Deficiency Letter  
Erosion and Sediment Control (E&S) Permit  
Regional Energy Access Expansion Project  
DEP Application No. ESG830021002-00  
APS No. 1036787; AUTH ID No. 1350583  
Buck Township, Bear Creek Township, Plains Township, Jenkins Township, Kingston  
Township, Dallas Township, Wyoming Borough, West Wyoming Borough, Laflin  
Borough, Luzerne County  
Ross Township, Chestnuthill Township, Tunkhannock Township, Monroe County  
Lower Mount Bethel Township, Northampton County  
Lower Makefield Township, Bucks County  
East Whiteland Township, Chester County

Dear Mr. Dean:

The Department of Environmental Protection (DEP) has reviewed the above referenced application/NOI and has identified the following technical deficiencies. The Pennsylvania Erosion and Sediment Pollution Control Program Manual and the Pennsylvania Stormwater Best Management Practices Manual include information that will aid you in responding to some of the deficiencies listed below. The deficiencies are based on applicable laws and regulations, and the guidance sets forth the DEP's established means of satisfying the applicable regulatory and statutory requirements. The incomplete submission of the application package voids the permit decision guarantee process and any agreements that have been made regarding the timeline for the permit application review. The DEP and District will continue to follow the permit review process procedures in the review and processing of this permit application.

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### **Technical Deficiencies**

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The following comments are for the Northampton County portion of the project:

1. The maximum slope length, as provided on Standard E&S Worksheet #1, is exceeded above the proposed 24" CFS #9. Maximum slope lengths should conform to those provided in Figure 4.2 of the E&SPC Manual. [25 Pa Code §102.4(b)(5)(viii), 25 Pa Code §102.11(a)(1)]

2. Provide typical detail(s) for proper handling of potential sinkholes identified as a soil limitation and as having the potential to cause pollution to the surface waters on the detail sheet(s) (page 6 of the E&SPC Manual). [25 Pa Code §102.4(b)(5)(ix), 25 Pa Code §102.11(a)(1)]
3. Provide instructions for proper handling of potential sinkholes identified as a soil limitation and having the potential to cause pollution to the surface waters (page 6 of the E&SPC Manual). [25 Pa Code §102.4(b)(5)(xii), 25 Pa Code §102.11(a)(1)]
4. Resubmission fee should be submitted to the District with the revised plans and narratives for review (per Section VIII, Northampton County Conservation District Erosion and Sediment Pollution Control Plan Review Fee Schedule.). [25 Pa Code §102.6(b)(3)]

The following comments are for the Monroe County portion of the project:

5. It appears that the project discharges to Mud Pond Run (EV, MF) from Miles 54.25 to Mile 55.60. Please update the Receiving Waters List on the cover sheet, the ribbon on the plan drawings, and the Application. [25 Pa Code §102.4(b)(5)(v)]
6. It appears additional E&S controls (compost socks and slope blankets) are required for the grading operations related to the installation of the tanks on the MLV505LD86 site. Please add the BMP's to the plan and address the installation of the BMP's in the sequence of construction. [25 Pa Code §102.4(b)(5)(vi)]
7. Pipeline Installation Sequence: Step 15 (installation of perimeter controls) should be performed prior to any grubbing operations occurring at the site (step 10). Please revise the sequence to install perimeter controls prior to all grubbing operations. [25 Pa Code §102.4(b)(5)(vii)]
8. Please include the stockpiling of topsoil materials in the sequence of construction for use as part of the final site restoration. [25 Pa Code §102.4(b)(5)(vii)]
9. Please indicate in the sequence how the material removed from the trenching operation will be stored (stockpiled or spread/compacted for access road). [25 Pa Code §102.4(b)(5)(vii)]
10. The "Pipeline Work Sequence in Wetlands" should include the requirement to remove compost filter socks in their entirety (compost and tube) in areas adjacent to wetlands. Compost shall not be placed in wetland areas. [25 Pa Code §102.4(b)(5)(vii)]
11. The "Pipeline Work Sequence at Stream Crossings" should include the requirement to excavate and segregate stream bottom material into a separate stockpile for reuse as part of the restoration of the stream area. [25 Pa Code §102.4(b)(5)(vii)]
12. The "Pipeline Work Sequence at Stream Crossings" should include the requirement to install slope blankets on disturbed areas within 50 of the top of bank of the stream. [25 Pa Code §102.4(b)(5)(vii)]

13. The “Pipeline Work Sequence at Stream Crossings” should include the requirement to install riparian buffer plantings/seeding in riparian areas disturbed by construction. [25 Pa Code §102.4(b)(5)(vii)]
14. Please include in the “Pipeline Work Sequence at Stream Crossings” that pumped water filter bags should discharge into well-vegetated areas and the distance from the discharge to the top of bank of the stream should be maximized to the extent practical. Please make a similar revision for work adjacent to wetlands. [25 Pa Code §102.4(b)(5)(vii)]
15. A site-specific sequence of construction should be provided for the MLV505LD86 construction, including grading for tank placement, road installation, PCSM BMP installation, removal and regrading of the tank areas, and final site restoration. The sequence should also refer to the detailed PCSM BMP installation sequence on the PCSM drawings. [25 Pa Code §102.4(b)(5)(vii)]
16. Please provide calculations for the determination of the flows and pipe sizing for the clean water crossing pipes. In addition, please specify the rock size to be used for the outlet basins associated with these pipes and include this information on the plan drawings. [25 Pa Code §102.4(b)(5)(viii)]
17. Please provide calculations for the sizing of the diversion channels. [25 Pa Code §102.4(b)(5)(viii)]
18. Please add a prominent note to the plan drawings that sheet flow shall be maintained to the compost filter socks. If concentrated flow/overtopping occurs, a rock filter outlet shall be installed at the point of concentration/overtopping. [25 Pa Code §102.4(b)(5)(ix)]
19. Please upgrade compost Sock EL-CFS-CY1-001 to a 24” sock (Dwg 3) to maintain consistent sock size in this area. [25 Pa Code §102.4(b)(5)(ix)]
20. Please add a prominent note on Drawings 3-5 to install the contractor yard in sections as conditions and the need for additional space is required to limit the extent of earth disturbance in this area. [25 Pa Code §102.4(b)(5)(ix)]
21. Please clarify the need for parallel rows of compost socks at Stations 753+00 to 758+50. In general, compost socks are not installed in a parallel fashion. [25 Pa Code §102.4(b)(5)(ix)]
22. Compost Socks are shown along the downstream edge of the work corridor. In many cases, the socks are shown perpendicular rather than parallel to the existing grade. These socks will act as diversion channels that will funnel water towards the low point of the compost socks. A Rock Filter Outlet should be provided at these points. Please review the plans and add rock filters in the appropriate points where significant drainage areas and natural low points occur, including the following [25 Pa Code §102.4(b)(5)(ix)]:

- a. North and East corners of Contractor Yard CY-MO-001 (Drawing5)
  - b. Station 754+50 left
  - c. Station 759+00 left
  - d. Station 905+50 left
  - e. Station 912+00 left
  - f. Station 924+75 left
23. Please review the flow direction on the waterbars. In general, waterbars should discharge away from the work area (and not allow flow to re-enter the work area downstream) and away from adjacent developed land as much as practical. The direction of discharge should be reconsidered at the following locations [25 Pa Code §102.4(b)(5)(ix)]:
- a. Station 772+50
  - b. Station 935+40 (slide uphill)
  - c. Station 1078+00
  - d. Station 1080+50
  - e. Station 1179+25
24. Please provide a callout and/or other additional information on the plans to identify the area which required riparian buffer plantings and seeding (may reference standard details VCR-1 and VCR-2). [25 Pa Code §102.4(b)(5)(ix)]
25. The Legend on the E&S sheets includes the identification of geohazard areas and details are provided on how to address these areas. However, these areas do not appear to be identified in the plan drawing ribbon. Please identify these areas as shown in the legend. [25 Pa Code §102.4(b)(5)(ix)]
26. Wetland Equipment Crossing (WEM) Detail, Drawing 40: Please specify the minimum size of compost filter sock to install along the edges of the timber matting. [25 Pa Code §102.4(b)(5)(ix)]
27. Waterbar Details: On a previous project completed by Williams in Monroe County (Franklin Loop), the trench excavation material was spread out and compacted on the downstream side of the trench to create a corridor for construction vehicles to traverse along the pipeline. This operation would create a drop-off condition along the edge of this corridor. Downstream of the waterbar/compost sock BMP, rill or gully erosion would occur where the discharge traveled down the exposed slope. Please add a note to the detail to monitor the discharge below the waterbar/sock on exposed slopes. Repair erosion and provide additional BMP's (rock protection or sock at the base of the slope) to minimize sediment leaving the work area. [25 Pa Code §102.4(b)(5)(ix)]
28. Waterbar Detail: Please add a note to the detail to evaluate the water flow direction and waterbar location to utilize existing points of concentrated discharge and to minimize flows from re-entering the work area. [25 Pa Code §102.4(b)(5)(ix)]
29. Waterbar and Broad Based Dip Details: Please add the requirements to inspect the compost



sock traps/sumps at these devices for overtopping or undermining of the compost socks, and to increase the size of the sump and/or compost sock to maximize filtering of runoff. [25 Pa Code §102.4(b)(5)(ix)]

30. Bored Waterbody Crossing (WBX) Detail: Please note to stockpile soil material 50' from the top of bank to limit impacts within the stream floodway. [25 Pa Code §102.4(b)(5)(ix)]
31. Diversion Channel Detail: For the earth berm alternative, please revise the erosion control matting on the bottom area of the berm to extend upslope to the elevation of the top of berm rather than the 5' minimum dimension. [25 Pa Code §102.4(b)(5)(ix)]
32. Please update the Application and other supporting information as a result of addressing the review comments in this letter. [25 Pa Code §102.6(a)(1)]
33. Please provide an updated status of the various PNDI issues related to the project. Resolution of PNDI issues is required prior to permit issuance. [25 Pa Code §102.6(a)(1)]
34. The MLV505LD86 site proposes drainage and driveway work within Sugar Hollow Road, which is a state road. Please provide the status of submittals and approvals for work proposed within the state road right of way. The project proposes storm piping within the right of way which may interfere/impact the existing roadway drainage facilities, requiring revisions to the design. [25 Pa Code §102.6(a)(1)]
35. The fee for service for the next submittal is \$11,766.00, payable to "Monroe County Conservation District". [25 Pa Code §102.6(b)(3)]

The following comments are for the Chester County portion of the project:

36. The plan is titled as an E & S but the proposed plan has structural PCSM BMPs proposed and a separate PCSM Plan has been provided. Please remove Site Restoration from the title block. [25 Pa Code §102.11(a)(1)&(2)]
37. Please provide the required site engineer Critical Stage inspections in the Sequence of Construction (SOC). [25 Pa Code §102.11(a)1, §102.11(a)(2)]
38. The second to last step of the SOC should be a final Critical Stage inspection by the site's engineer to verify all installed PCSM BMPs are installed and not impacted by construction activities/ runoff. [25 Pa Code §102.11(a)(1)&(2)]
39. The last step of the SOC should be to submit a Notice of Termination once the project is complete and permanently stabilized. [25 Pa Code §102.11(a)(1)]
40. Please illustrate the topsoil stockpile on the plans. [25 Pa Code §102.11(a)(1)]
41. Please make sure the perimeter controls are installed in the SOC. [25 Pa Code §102.11(a)(1)]

42. It appears the proposed Rock Construction Entrance will be installed on an existing driveway. If this driveway is paved it may be better to relocate it to where the contractor will have to access off paved areas to unpaved areas. Please evaluate and revise if needed. [25 Pa Code §102.11(a)(1)]

The following comments are for the Luzerne County Portion of the project:

Lateral

43. Please explain why wetland regrading is proposed and verify that this is an acceptable activity. [25 Pa Code §102.4(b)(5)(iii)]
44. Please show on the plans how the area of hydrostatic discharge on Sheet 40 will be accessed. [25 Pa Code §102.4(b)(5)(iii)]
45. Perimeter BMPs have not been provided for resources on Sheets 8, 25, and 29. Please check all other areas. [25 Pa Code §102.4(b)(5)(vii)]
46. Provide a site-specific sequence of BMP installation and removal in accordance with Chapter 2 of the E&SPC Manual. [25 Pa Code §102.4(b)(5)(vii), 25 Pa Code §102.11(a)(1)]
47. Provide calculations to show that compost filter sock traps provide the required 2,000 cubic feet per acre storage capacity. §102.11(a)(1) Standard E&S Worksheet #14 is recommended for this purpose. [25 Pa Code §102.4(b)(5)(vii)]
48. The plan map(s) show a conflict between compost filter sock in wetlands and proposed timber mats. Explain how this conflict will be resolved. [25 Pa Code §102.4(b)(5)(ix)]
49. Please remove compost filter socks from inside existing wetlands. [25 Pa Code §102.4(b)(5)(ix)]
50. The plan map(s) show(s) compost sock(s) crossing contours. Sediment barriers should be installed at existing level grade (E&SPC Manual, pages 61 and 75). §102.11(a)(1) Please make all necessary corrections. Sock against contours on side cast material on the side of the pipeline and at resource is acceptable. [25 Pa Code §102.4(b)(5)(ix)]
51. Sheet 24 shows waterbars discharging to the proposed access road. Please revise. [25 Pa Code §102.4(b)(5)(ix)]
52. Compost filter sock trap locations could not be located. Please provide sheet numbers on table detail. [25 Pa Code §102.4(b)(5)(ix)]
53. Please provide a clean out stake for Compost filter sock traps. [25 Pa Code §102.4(b)(5)(ix)]

54. Compost filter sock trap table specifies the use of a 12" diameter sock which is inconsistent with typical detail. [25 Pa Code §102.4(b)(5)(ix)]

MLV515RA20 Site

55. As per the Pennsylvania Stormwater Best Management Practices Manual, Appendix C, Protocol 2, a 2-foot clearance should be maintained between the bottom of the proposed BMP where infiltration is to occur and any limiting zone (mottling, seasonally high water table, bedrock, etc.). The proposed BMP has the potential to have an inadequate distance as specified by the manual. Please provide testing /documentation that shows an adequate distance exists or revise the BMP as required. Please discuss this matter with DEP.
56. The plan map(s) show channel DC-D1 and OP3 discharging to an area that is not identified as surface water. If this is a non-surface water discharge, provide a discharge analysis according to Ch. 102 Off-Site Discharges of SW to Non-Surface Waters FAQ. [25 Pa Code §102.4(b)(5)(iv)]
57. Please relabel the collector channel at MLV-515RA20 accordingly. [25 Pa Code §102.4(b)(5)(iii)]
58. Please provide proposed final contours for all proposed earthmoving (including channels) that meet the standards in Item 3 on page 2 and on page 398 in the E&SPC Manual. [25 Pa Code §102.4(b)(5)(iii), 25 Pa Code §102.11(a)(1)]
59. Provide a site-specific sequence of BMP installation and removal in accordance with Chapter 2 of the E&SPC Manual. [25 Pa Code §102.4(b)(5)(vii), 25 Pa Code §102.11(a)(1)]
60. Please explain the purpose of the pipe outlet through the proposed Infiltration Berm. [25 Pa Code §102.4(b)(5)(ix)]
61. The plan map(s) show(s) compost sock(s) crossing contours. Sediment barriers should be installed at existing level grade (E&SPC Manual, pages 61 and 75). §102.11(a)(1) Please make all necessary corrections. [25 Pa Code §102.4(b)(5)(ix)]

MLV515RA30 Site

62. As per the Pennsylvania Stormwater Best Management Practices Manual, Appendix C, Protocol 2, a 2-foot clearance should be maintained between the bottom of the proposed BMP where infiltration is to occur and any limiting zone (mottling, seasonally high water table, bedrock, etc.). The proposed BMP has the potential to have an inadequate distance as specified by the manual. Please provide testing /documentation that shows an adequate distance exists or revise the BMP as required. Please discuss this matter with DEP.
63. Swale 1 contours show a ponding area, not a swale. [25 Pa Code §102.4(b)(5)(iii)]

64. Provide a site-specific sequence of BMP installation and removal in accordance with Chapter 2 of the E&SPC Manual. [25 Pa Code §102.4(b)(5)(vii), 25 Pa Code §102.11(a)(1)]

Carverton Tie-In

65. As per the Pennsylvania Stormwater Best Management Practices Manual, Appendix C, Protocol 2, a 2-foot clearance should be maintained between the bottom of the proposed BMP where infiltration is to occur and any limiting zone (mottling, seasonally high water table, bedrock, etc.). The proposed BMP has the potential to have an inadequate distance as specified by the manual. Please provide testing /documentation that shows an adequate distance exists or revise the BMP as required. Please discuss this matter with DEP.
66. Perimeter BMPs have not been provided downslope of all earth disturbance. [25 Pa Code §102.4(b)(5)(vii)]
67. Provide a site-specific sequence of BMP installation and removal in accordance with Chapter 2 of the E&SPC Manual. [25 Pa Code §102.4(b)(5)(vii), 25 Pa Code §102.11(a)(1)]

Lower Demund Tie-In

68. As per the Pennsylvania Stormwater Best Management Practices Manual, Appendix C, Protocol 2, a 2-foot clearance should be maintained between the bottom of the proposed BMP where infiltration is to occur and any limiting zone (mottling, seasonally high water table, bedrock, etc.). The proposed BMP has the potential to have an inadequate distance as specified by the manual. Please provide testing /documentation that shows an adequate distance exists or revise the BMP as required. Please discuss this matter with DEP.
69. Please provide proposed final contours for all proposed earthmoving (including channels) that meet the standards in Item 3 on page 2 and on page 398 in the E&SPC Manual. [25 Pa Code §102.4(b)(5)(iii), 25 Pa Code §102.11(a)(1)]
70. Provide a site-specific sequence of BMP installation and removal in accordance with Chapter 2 of the E&SPC Manual. [25 Pa Code §102.4(b)(5)(vii), 25 Pa Code §102.11(a)(1)]

Hildebrandt Tie-In

71. As per the Pennsylvania Stormwater Best Management Practices Manual, Appendix C, Protocol 2, a 2-foot clearance should be maintained between the bottom of the proposed BMP where infiltration is to occur and any limiting zone (mottling, seasonally high water table, bedrock, etc.). The proposed BMP has the potential to have an inadequate distance as specified by the manual. Please provide testing /documentation that shows an adequate distance exists or revise the BMP as required. Please discuss this matter with DEP.

72. Provide a site-specific sequence of BMP installation and removal in accordance with Chapter 2 of the E&SPC Manual. [25 Pa Code §102.4(b)(5)(vii), 25 Pa Code §102.11(a)(1)]
73. Level spreader does not appear to be shown on a level grade. Please revise accordingly. [25 Pa Code §102.4(b)(5)(ix)]

Compressor Station 515

74. Please show existing stormwater BMPs. [25 Pa Code §102.4(b)(5)(i)]
75. All symbols shown on the plan drawing have not been provided in the legend (ex. Beige shading). [25 Pa Code §102.4(b)(5)(iii)]
76. Step 14 calls for the installation of Collector Channels that are not shown on the E&S plan. Channels should be stabilized “as per plan”. [25 Pa Code §102.4(b)(5)(vii)]
77. Specify in the construction sequence the critical stages when the licensed professional must be allowed to oversee the installation of structural PCSM BMP(s) as required by §102.8 (k). [25 Pa Code §102.4(b)(5)(vii)]
78. The E&S plan Sheet 4 notes the installation of a level spreader downslope of the infiltration berm. It is recommended that the berm be initially installed and channel/pipping begin from the downstream end upslope, to alleviate the need for a spreader and berm disturbance. [25 Pa Code §102.4(b)(5)(vii)]
79. The rock filter/inlet protection typical on the plan drawing(s) does not meet the standards shown on Standard Construction Detail Number #4-14. §102.11(a)(1) Please make all necessary changes. [25 Pa Code §102.4(b)(5)(ix)]
80. The plan map(s) show(s) compost sock(s) crossing contours. Sediment barriers should be installed at existing level grade (E&SPC Manual, pages 61 and 75). §102.11(a)(1) Please make all necessary corrections. [25 Pa Code §102.4(b)(5)(ix)]
81. Provide a construction detail for the proposed level spreader (Item 9, page 5 of the E&SPC Manual). [25 Pa Code §102.4(b)(5)(ix), 25 Pa Code §102.11(a)(1)]
82. Provide a typical detail for each type of channel proposed (Item 9, page 5 of the E&SPC Manual). [25 Pa Code §102.4(b)(5)(ix), 25 Pa Code §102.11(a)(1)]

Contractor Yard

83. BMPs have not been shown on the plan drawing per step 6 (sock diversions and sediment trap) of the construction sequence. [25 Pa Code §102.4(b)(5)(vii)]

84. Geological Hazard Assessment and Mitigation Plan:

- a. The Geological Hazard Assessment and Mitigation Plan did not include any geologic field investigation, drilling, or test pitting, to confirm the findings of the desktop review. Following the desktop reference review, the field geohazard assessment consisted of walking the ROW and immediately adjacent areas to observe the existing ground surface conditions and to document evidence of past landslide events. The Geological Hazard Assessment should, at a minimum, include the geotechnical investigations that were conducted at resource crossings. [25 Pa Code §102.4(b)(5)(xiii)]
- b. The Geological Hazard Assessment and Mitigation Plan indicates that Acid Producing Rock (APR) will likely be encountered. According to the Plan, the Marcellus Shale is expected to be encountered from MP 45.55-46.7, previously strip-mined areas are present from MP 16.6-16.32, and soils pertaining to strip mining and mine spoils is shown between MPs: 9.61 – 9.75, 9.84 – 9.89, 11.06 – 11.34, 11.47 – 11.60, 11.70 – 11.77, 11.96 – 12.38, 12.50 – 12.80, 12.90 – 13.14, 13.32 – 13.47, 15.30 – 15.70, 15.83 – 15.93, and 16.16 – 16.32. Section 3.4 of the plan states “*If coal or other acid producing rock is encountered in sufficient concentrations it can be mitigated in accordance with PADEP guidelines*”. APR is not mentioned on the E&S Plans. Please indicate what concentration of APR will trigger mitigation actions and what qualified professional will be onsite to determine that APR is present. [25 Pa Code §102.4(b)(5)(xii)]

85. Preparedness, Prevention, and Contingency (PPC) Plan:

- a. Section 6.2 of Inadvertent Return Response, and Contingency Plan: A loss of circulation must be reported to the DEP in accordance with 25 Pa Code §78a.68a (i) and 25 Pa Code §91.33. An important part of the inspection and monitoring protocol includes a well-defined notification system. The developed notification system should identify which incidents are reportable, which need to be reported immediately, clearly state which staff are responsible for reporting, and which entities need to be notified. [25 Pa Code §102.5(l)]
- b. Section 7 of the Inadvertent Return Response and Contingency Plan: Please include in the Inadvertent Returns Response and Contingency Plan provisions to contact the Department immediately by email, phone, or electronically delivered letter if a loss of pressure or an inadvertent return occurs during drilling operations. Drilling operations should not continue until a Professional Engineer (PE) or Professional Geologist (PG) has performed an inspection of the drilling site and drill alignment. The PE or PG should then notify the Department in writing that the drilling can commence without the risk of an inadvertent return. [25 Pa Code §102.5(l)]
- c. Should an inadvertent return occur during drilling operations, a Re-evaluation Report should be submitted to the Department by the PE or PG examining the

drilling alignment and ensuring that another inadvertent return is unlikely. The Department will need to review this submitted information and approve the restarting of drilling operations. [25 Pa Code §102.5(l)], [25 Pa. Code § 105.302(6)]

- d. Section 7 of the Inadvertent Return Response and Contingency Plan refers to Sections 7.2.1 and Section 7.2.2, please clarify as these Sections are not present within the document. [25 Pa Code §102.5(l)]
- e. Section 7.6 of the Inadvertent Return Response and Contingency Plan states no wells or public water supplies were located within 1,000 ft of the proposed DP crossing. Please confirm that this includes all water supplies. The definition of water supply can be found in 25 Pa. Code § 78a.1. The section of regulations dealing with the “Protection of Water Supplies” can be found in 25 Pa. Code § 78a.51 and 25 Pa. Code §§ 91.31 - 91.34. Project proponents utilizing trenchless technology need to incorporate a plan for locating private water supplies, in addition to public water supplies, and should evaluate all information sources to locate and identify all private water supplies. DEP recommends using the following guidelines to locate and identify private water supplies: Locate all private wells within a minimum of 450-feet of the centerline of the pipeline in non-karst terrain, and a minimum of 1000-feet in karst terrain or areas that include limestone and dolomite bedrock. The project proponent should compile mailing lists for all properties at a minimum of 450-feet (1,000-feet in karst) from the pipeline, or utility line, centerline to inquire as to whether a private well or other water supply (e.g. spring) is present on the property. [25 Pa Code §102.5(l)]
- f. Section 3.2 of the Inadvertent Return Response and Contingency Plan states the Direct Pipe (DP) path will be monitored from the banks as it crosses under the river. DEP recommends monitoring the DP path via boat should a loss of circulation (LOC), significantly diminished circulation or lubrication fluid volume loss occur. [25 Pa Code §102.5(l)]

#### Application Form

- 86. Within the Notice of Intent (NOI), the Receiving Waters is not clear what each stream Designated Use Stream Classification or Existing Use Stream Classification. Please revise the NOI so that each stream has a designated use and/or existing use classification. [25 Pa Code §102.6(a)(1)]
- 87. The NOI does not indicate if there are any tributaries to streams that will be a receiving water or will have any earth disturbance within the tributary watershed. Please revise the NOI to include all tributaries that have earth disturbance associated with the construction of the pipeline or associated ancillary facilities. Also, please include the designated use and/or existing use classification for each tributary. [25 Pa Code §102.6(a)(1)]

88. The submitted PNDI receipt does not appear to include the work within Chester County. Please confirm and provide all necessary PNDI receipts, PNDI clearances, etc. for the portion of the work within Chester County. [§102.6(a)(2)]

PCSM Module(s)

89. Please provide the depth or elevations of the infiltration testing performed on the project. It appears from the soils report that infiltration testing was performed at 48" below the ground surface, near the termination depth of the tests pits. The infiltration berms are assuming infiltration at the ground surface and the report notes a lean silt and lean clay layer 10-12" below the surface. Infiltration testing should be performed in the same soil strata where infiltration will occur. [25 Pa Code §102.8(f)(8)]
90. Please provide a separate Module 3 for each receiving surface water per the application instructions. Attachment 1.1-1 as referenced does not appear to include this information. [25 Pa Code §102.8(h)]
91. It appears that there could be an increase in stormwater volume, rate, and quality for storm events up to and including the 2-year/24-hour storm during earth disturbance activities. If so, please uncheck the first box on Module 3 and complete the last portion stating "If a Non-Discharge Alternative will not be utilized, explain the rationale for non-selection, including why none of the alternatives are considered environmentally sound and cost-effective." [25 Pa Code §102.8(h)]
92. Please ensure that all BMPs selected (non-discharge and ABACT) exist within the watershed to each receiving surface water. [25 Pa Code §102.8(h)]
93. Please confirm that adequate efforts have been made to ensure no significant changes to pre-construction hydrology that would affect the wetlands. [25 Pa Code §102.4(b)(8)]
94. It is unclear whether Module 4 is required for the portion of the work within Chester County, please address. While one was provided, it references Attachment 1.1-1, which does not appear to clarify again whether the project site is within 150 feet of a perennial or intermittent stream, creek, lake, pond, or reservoir with a designated use of High Quality Waters (HQ) or Exceptional Value Waters (EV) for the portion of the project within Chester County. Until this is clarified, and based on the application materials, a technical review of Module 4 was not reviewed by CCCD staff. If required, a review of the riparian buffer requirements of 102.14 and Act 162 of 2014 will be done at the time of resubmission. [25 Pa Code §102.14]

PCSM Report

95. Please provide the maximum loading ratio of 5:1 (impervious area to infiltration area), and the maximum loading ratio of 8:1 (total area to infiltration area) for the infiltration berms. [25 Pa Code §102.8(f)(8)]



96. For MLV-515RA20, PCSM Critical Stages, 3. and 4., mention the construction of a Dry Extended Detention Basin. However, this mainline valve does not have a dry extended detention basin proposed for volume mitigation. Please revise accordingly. [25 Pa Code §102.8(f)(8)]
97. For MLV-515RA30, PCSM Critical Stages, 4., there is the statement, “During construction of the Dry Extended Detention Basin the licensed professional will observe that the BMP is constructed in accordance with the plans and specifications.” This mainline valve does not have a dry extended detention basin proposed for volume mitigation. Please revise accordingly. [25 Pa Code §102.8(f)(8)]
98. Mainline valve MLV-515RA30 states that the mainline pad will serve as a PCSM infiltration BMP for volume mitigation. However, within the Valve Yard Pad, compaction of the subgrade is required to limit infiltration in the pad area due to the entire Valve Yard Pad is in fill construction. If compaction is to occur with the mainline valve, then infiltration cannot be accounted for within this area. [25 Pa Code §102.8(f)(8)]
99. For MLV-515RA30, PCSM Critical Stages, 5., there is the statement, “following installation of the Valve Yard Pad subgrade to ensure stormwater flow is directed to the infiltration berm.” This mainline valve does not have any infiltration berms proposed for volume mitigation. Please revise accordingly. [25 Pa Code §102.8(f)(8)]
100. For the Carverton Road Tie-In, the Regional Energy Lateral PCSM Report states that soil amendment will be used to attenuate and infiltrate peak flow rate and volume from impervious areas. Please show on the Carverton Tie-In PCSM Drawings the location(s) of the proposed PCSM BMP soil amendment. [25 Pa Code §102.8(f)(8)]
101. The Carverton Tie-In states that the mainline pad will serve as a PCSM infiltration BMP for volume mitigation. However, within the BMP Installation Sequence, Valve Yard Pad, compaction of the subgrade is required to limit infiltration in the pad area due to the entire Valve Yard Pad is in fill construction. If compaction is to occur with the Carverton Tie-In, then infiltration cannot be accounted for within this area. [25 Pa Code §102.8(f)(8)]
102. Please provide the maximum impervious loading ratio of 5:1 (impervious area to infiltration bed area) and the maximum total loading ratio of 8:1 for the Carverton Tie-In infiltration bed. [25 Pa Code §102.8(f)(8)]
103. The infiltration berm calculations show the volume to be infiltrated for the infiltration berms and the infiltration basin is not consistent with the volume to be infiltrated shown in the PCSM Spreadsheet Volume Management. Please revise accordingly for consistency. [25 Pa Code §102.8(f)(8)]
104. The proposed PCSM BMP infiltration berm is being used for volume mitigation at the MLV-515LD86 site. The PCSM Spreadsheet, Volume Management, shows that the infiltration berm has evapotranspiration being proposed for volume mitigation. An

- infiltration berm is not utilized for evapotranspiration. Please revise the calculations to exclude the evapotranspiration volume management. [25 Pa Code §102.8(f)(8)]
105. Please provide the maximum impervious loading ratio of 5:1 (impervious area to infiltration bed area) and the maximum loading ratio of 8:1 for MLV-505LD86 infiltration berms. [25 Pa Code §102.8(f)(8)]
  106. Compressor Station 200 is located in an area that has several surface depressions located near the project site, the maximum impervious loading ratio of 3:1 (impervious area to infiltration bed area) is recommended for the infiltration berm, which is being proposed as the only infiltrating PCSM BMP. Should the loading ratio not be met, please include additional PCSM BMPs within the project area to accommodate the volume mitigation requirement. [25 Pa Code §102.8(f)(8)]
  107. The proposed PCSM BMP infiltration berm being used for volume mitigation at the Compressor Station 200 site. The PCSM Spreadsheet, Volume Management, shows that the infiltration berm has evapotranspiration being proposed for volume mitigation. An infiltration berm is not utilized for evapotranspiration. Please revise the calculations to exclude the evapotranspiration volume management. [25 Pa Code §102.8(f)(8)]
  108. The proposed PCSM BMP infiltration berm is being used for volume mitigation at the Compressor Station 515 site. The PCSM Spreadsheet, Volume Management, shows that the infiltration berm has evapotranspiration being proposed for volume mitigation. An infiltration berm is not utilized for evapotranspiration. Please revise the calculations to exclude the evapotranspiration volume management. [25 Pa Code §102.8(f)(8)]
  109. The PCSM Spreadsheet Volume Management shows that the proposed PCSM BMP infiltration berm for the Compressor Station 515 will infiltrate approximately 24,117 cubic feet of stormwater; however, the routing calculations show that the 2-year/24-hour storm event will produce approximately 19,129 cubic feet of stormwater. A PCSM BMP cannot infiltrate more stormwater than is being directed towards the PCSM BMP. Please revise the calculations accordingly. [25 Pa Code §102.8(f)(8)]
  110. Please provide photographs of the drainage path downstream of the cross pipes on Sugar Hollow Road which receive discharges from the project, indicating whether the path from the culverts to Sugar Hollow Creek is currently stable. [25 Pa Code §102.8(f)(8)]
  111. The PCSM Spreadsheet is based on an increase in impervious surfaces of 0.517 acres (0.617-0.1). The Rate Control analysis (Post w/o BMP's vs Pre) indicates an increase in the impervious surface of 0.577 acres. These numbers should be the same. Please revise the Rate and/or PCSM Spreadsheet calculations for a consistent increase in the impervious surface on the project. [25 Pa Code §102.8(f)(8)]
  112. The surface area for Infiltration Basin #1 in the PCSM Spreadsheet should be the corresponding value at the first outlet from the basin (Riser discharge at 926.5). In

addition, the infiltration period should be 8 hours (24" divided by 3"/hr). Please revise. [25 Pa Code §102.8(f)(8)]

113. The storage values for Infiltration Berm #1 are based upon a berm length of 182 feet. The infiltration berm on the drawing scales approximately 80' (along the contour) to create the ponding area. Please explain this discrepancy and/or revise the storage value (and surface area) for this facility on the PCSM Spreadsheet and the Rate control analysis. [25 Pa Code §102.8(f)(8)]
114. The surface area for Infiltration Berm #2 (977 SF) appears to be significantly larger than the surface area provided for this facility on the plans (estimated at 170 SF). In addition, the infiltration berm needs to be extended uphill on the north end of the berm (into the gravel roadway) to capture and contain the runoff to the top of the berm elevation of 915.6. This does not appear feasible since the berm will encroach into the relocated driveway. Please revise the berm and/or PCSM spreadsheet to reflect the area/storage value of the facility. A similar revision to the storage volume is required for the Rate control analysis. [25 Pa Code §102.8(f)(8)]
115. For Drainage Area DA-1, the Predevelopment runoff is based on a time of concentration (Tc) of 17.3 minutes. In the Post Development condition, runoff from Subarea DA-1 Undetained is based on a Tc of 21.3 minutes. The post-development Tc should not exceed to predevelopment Tc value unless there is a significant change to the watershed area or drainage patterns. Please revise the runoff from this subarea using a Tc equal to or less than the predevelopment Tc value. [25 Pa Code §102.8(f)(8)]
116. As noted above, the surface area and corresponding storage volumes for Berms #1 and #2 do not match the values obtained from the drawings. Please update the Rate control analysis or drawings to reflect the area and volume values of the infiltration berms. [25 Pa Code §102.8(f)(8)]

The following comments are in reference to the Chester County portion of the PCSM report.

117. Please provide consistent discharge point(s) labeling between all E&S and PCSM plan drawings, the ESCP permit application Section 1-1.1 Supporting Information, PCSM Module 2, and any other supporting information/application materials. [25 Pa Code §102.8(b)(1), §102.4(c), §102.8(f)(15)]
118. Please review the Application Instructions (i.e. page 14) regarding the definition of discharge point, and carefully review the proposed design to see if additional discharge points should be added and/or existing discharge points should be relocated where concentrated flow leaves a project site. There are several cross pipes identified on the plan drawings that should be analyzed. Please make all necessary updates to the application materials. [25 Pa Code §102.8(b)(1), §102.4(c), §102.8(f)(15)]

119. Please extend the flow path in the off-site discharge analysis to extend to the confluence with a surface water. In addition, identify the soil types, erodibility factors, and vegetative cover of the flow path. [25 Pa Code §102.8(b)(1), §102.4(c), §102.8(f)(15)]
120. On the Erosion and Sediment Control (E&S) and the PCSM Plan drawings, identify all properties and property owners that will or may receive off-site stormwater discharges from the project site until discharges reach surface waters. [25 Pa Code §102.8(b)(1), §102.4(c), §102.8(f)(15)]
121. Please expand the Off-Site Discharge Analysis to analyze during construction discharges. The applicant must evaluate the effect construction and post-construction stormwater discharges may have on accelerated erosion to downslope or adjacent properties. Please provide an analysis that demonstrates that the proposed volume and peak rate of stormwater discharging to the flow path during construction will avoid, minimize, or mitigate accelerated erosion or sedimentation for storm events up to and including the 10-year/24-hour storm. The calculations should be consistent with the Erosion and Sediment Pollution Control Program Manual. [25 Pa Code §102.8(b)(1), §102.4(c), §102.8(f)(15)]
122. Please provide calculations to show that there will not be accelerated erosion along the flow path to surface waters from the proposed BMP. This should consider, at a minimum, the width of flow, velocity, downslope land cover, and erodibility of the soils. [25 Pa Code §102.8(b)(1), §102.4(c), §102.8(f)(15)]
123. After expanding the Off-Site Discharge Analysis per the comments in this letter, please confirm if the applicant has the right to discharge and if the discharge follows existing flow paths. If so, please add a note stating such to the PCSM Plan and Offsite Discharge Analysis. [25 Pa Code §102.8(b)(1), §102.4(c), §102.8(f)(15)]
124. Please add a note that any erosion caused by discharges from BMPs within the site will be repaired and stabilized. [25 Pa Code §102.11(a)(2)]
125. Please verify that all conclusions and recommendations from the geotechnical engineering letter report have been appropriately incorporated into the site design and application materials (i.e. Sections 3.0-6, 4.0-1.1, 5.0). Also, please include these notes on the E&S Plan and provide a reference to them on the Construction Sequence. [25 Pa Code §102.11(a)(1), §102.11(a)(2)]
126. It appears that a desktop literature review has been provided in the geotechnical report. Please confirm that a thorough geotechnical investigation has been performed, including but not limited to suggested methodologies presented in Chapter 7 of the PA SW BMP Manual or other relevant literature (i.e. site reconnaissance including a thorough field examination for applicable features, drilling of boreholes, determination of groundwater elevations, geophysical surveys). Please consult with the geotechnical engineer and provide all necessary changes. [25 Pa Code §102.11(a)(2)]

127. Please provide a statement from Geotechnical Engineer on letterhead within the PCSM Narrative regarding the site's suitability for infiltration and add a note to the PCSM Plan to refer to this statement. [25 Pa Code §102.11(a)(2)]
128. Please update the PCSM Spreadsheet and all supporting calculations to include all disturbed areas, 3.16 acres per page I Section 1 of the PCSM Narrative. Based on this comment, an additional review will be conducted when the application is resubmitted to ensure that the proposed project meets the stormwater volume, rate, and water quality requirements and all post construction stormwater management requirements of 102.8.
129. The maximum loading ratio of 3:1 for impervious area to infiltration area in Karst areas has been exceeded for the proposed infiltration BMP. (Protocol 2 in Appendix C of the Stormwater BMP Manual). 25 Pa Code §102.11(a)(2). Please make all necessary corrections.
130. Please uncheck Box 3 on pages 3 & 5 of PCSM Module 2 as Boxes 2 is selected. [25 Pa Code §102.8(g)(2), §102.8(g)(3), §102.8(f)(8)]
131. Please note that if Box 4 on Module 2 under Stormwater Analysis – Runoff Volume is checked regarding the inclusion of the PCSM Spreadsheet – Volume Worksheet, then boxes 5-9 do not need to be completed. This will prevent duplicate information from potentially being inconsistent. Please verify that all information is consistent, or do not complete boxes 5-9 for those sheets. §102.8(g)(2)
132. Please update the PCSM Spreadsheet to demonstrate that 20% of the existing impervious is assumed meadow per 25 Pa Code 102.8(g)(2)(ii).
133. Please provide supporting calculations for the Volume Routed to the BMP in the structural BMP volume credit table in the volume tab of the PCSM spreadsheet that meet the guidance in the PCSM spreadsheet instructions. [25 Pa Code §102.8(f)(15)]
134. Per the PCSM Spreadsheet Instructions, “a vegetated PCSM BMP is a permanent BMP where vegetation is a dominant or significant component within the storage area. Vegetation must include species other than grasses. Grasses may be used, but may not be the only species planted because other species with deeper penetrating root systems are needed to achieve the infiltration and ET credits calculated by the spreadsheet.” Please check No for Vegetated in the structural BMP volume credit table in the volume tab of the PCSM spreadsheet per the seeding recommendations. Alternatively, please update the proposed vegetation in the BMP to include deeper-rooted plantings. [25 Pa Code §102.8(f)(15)]
135. The media depth in the structural BMP volume credit table in the volume tab of the PCSM spreadsheet is inconsistent with the plan drawings, please revise. [25 Pa Code §102.8(f)(15)]

136. The infiltration area in the structural BMP volume credit table in the volume tab of the PCSM spreadsheet is inconsistent with pdf page 83 of the PCSM Narrative, please revise. [25 Pa Code §102.8(f)(15)]
137. Please justify the Infiltration Period for the PCSM BMPs in the PCSM Spreadsheet. Per the Spreadsheet Instructions, the actual computed dewatering time should be entered here. Please provide dewatering calculations. [25 Pa Code §102.8(f)(15)]
138. Please provide a separate Module 3 for each receiving surface water per the application instructions. Attachment 1.1-1 as referenced does not appear to include this information. [25 Pa Code 102.8(h)]
139. It appears that there could be an increase in stormwater volume, rate, and quality for storm events up to and including the 2-year/24-hour storm during earth disturbance activities. If so, please uncheck the first box on Module 3 and complete the last portion stating “If a Non-Discharge Alternative will not be utilized, explain the rationale for non-selection, including why none of the alternatives are considered environmentally sound and cost-effective.” [25 Pa Code 102.8(h)]
140. Please ensure that all BMPs selected (non-discharge and ABACT) exist within the watershed to each receiving surface water. [25 Pa Code 102.8(h)]
141. Please confirm that adequate efforts have been made to ensure no significant changes to pre-construction hydrology that would affect the wetlands. [25 Pa Code 102.4(b)(8)]

#### PCSM Plan

142. It appears that there are discrepancies between the NOI and the Erosion and Sediment Control and Site Restoration Plans with respect to the stream classifications. Please revise the Plans or the NOI to reflect the designated and/or the existing use classifications for each stream to show consistency. [25 Pa Code §102.8(f)(9)]
143. Please show the infiltration area surface on the PCSM Plans for each proposed PCSM BMP. [25 Pa Code §102.8(f)(9)]
144. The MLV-515RA20 Site Plan, Sheet 64 of 91, of the Erosion and Sediment Control and Site Restoration Plans show a dry extended detention basin being utilized as a PCSM BMP, however, the MLV-515RA20 Post Construction Stormwater Management Plans show an infiltration berm as the PCSM BMP. Please revise accordingly to accurately reflect which PCM BMP will be used for volume control mitigation. [25 Pa Code §102.8(f)(9)]
145. The Dry Extended Detention Basin that is proposed to be a PCSM BMP for volume control at the mainline valve site MLV515RA20 is located within the floodway of a tributary to Mill Creek. Please analyze if that dry extended detention basin can be moved or re-configured so that the basin will not be within the floodway of the tributary to Mill Creek (S76-T2). [25 Pa Code §102.8(f)(9)]

146. The following comments are in reference to the proposed PCSM BMP soil amendment for the Carverton Tie-In [25 Pa Code §102.8(f)(9)]:

- a. Please provide a notation that the soil amendment should not take place within the drip line of trees or tree line.
- b. Please provide a notation that the soil amendment should not take place over utility installations within 30 inches of the surface.
- c. Please provide a notation that the soil amendment should not take place where trenching/drainage lines are installed.
- d. Please provide the notation that the soil amendment should not take place where compaction of the soils by design is required.
- e. Please provide the methodology for the soil amendment. The methodology and procedure that is specific at your site and should be performed using a sole-shank ripper, not a disk or plows.
- f. Please provide that the methodology (ripping, subsoiling, tilling, scarification, etc.) should only be performed when the soil conditions are dry.

147. It appears that several infiltration basins have been designed above the maximum height of an infiltration berm which is typically 2 feet unless it is being used to divert flow, create meandering, or lengthen flow pathways. This height has been exceeded and it is apparent that the fore mentioned reasons do not apply to the proposed berms. Please revise accordingly. [25 Pa Code §102.8(f)(9)]

148. Please make the following changes to the plans related to MLV505LD86 [25 Pa Code §102.8(f)(9)] :

- a. Please add a callout below Culverts #1 and #4 on the Drawing 4 to install an earth berm in the swales below the culvert in order to eliminate the runoff in the upstream swales from bypassing the culverts.
- b. Please specify the installation of the slope blankets (SC150BN, Pattern D) on the infiltration berm detail. The blankets should extend beyond the toe of the infiltration berm.
- c. Sugar Hollow Creek to the east of the MLV505LD86 site may be within 150' of the work associated with the site. Please show the 150' buffer line on the drawings in order to determine if there re riparian buffer impacts associated with this site.
- d. The BMP Installation Sequence for the Infiltration Berms should include the

- requirement to limit the construction equipment to the berm footprint. In addition, please add the installation of the slope blankets to the sequence.
- e. The BMP Installation Sequence for the Infiltration Basin should include the requirement to perform infiltration testing on the subgrade soils in the bottom of the basin. Infiltration test results shall be submitted to MCCD.
  - f. The PCSM Critical Stage notes should include the preparation of a written report and photographs documenting the critical stage inspection. Reports and photographs should be provided to MCCD upon request.
  - g. The Infiltration Basin detail proposes a valve on the underdrain beneath the basin bottom. Per recent DEP guidance, the underdrain should be removed or the valve should be replaced with a permanent plug. If a permanent plug is utilized, please add a note that MCCD shall be notified prior to the removal of the plug for maintenance of the basin. The plug shall be reinstalled upon completion of maintenance activities.
  - h. Please specify the berm top width on the Infiltration Berm detail.
  - i. The spillway elevation on the Spillway detail should be revised to elevation 927.00 to match the stormwater calculations.
149. Please carefully review the O&M plan for the project and ensure they are applicable. For example, PCSM Sheet 4 mentions channels but does not discuss trench drains or level spreaders. Please also use consistent nomenclature through the PCSM plan (i.e. pond drain). [25 Pa Code §102.8(m), §102.8(f)(10)]
150. There appears to be additional O&M information on PCSM Sheet 5, please relocate to Sheet 4 or provide a clear reference. [25 Pa Code §102.8(m), §102.8(f)(10)]
151. As certain mulches can sometimes increase nutrient loads to a BMP, CCCD recommends limiting the frequency of added mulch to surface BMPs after initial establishment in the long-term O&M requirements. Deeper rooted vegetation is recommended to cover the surface of the BMP as much as possible to aid in ET and to prevent erosion. [25 Pa Code §102.8(m), §102.8(f)(10)]
152. Please add a recommended minimum and maximum mowing frequency to the proposed infiltration berm O&M plan. [25 Pa Code §102.8(m), §102.8(f)(10)]
- The following comments are in reference to the Chester County portion of the PCSM Plans.
153. Please verify that E&S Module 1 item #3 regarding characteristics of the site are accurate for at least the past 50 years. [ 25 Pa Code §102.8(f)(3)]



154. In areas underlain by carbonate geology, it is recommended to provide a minimum of 4 feet of separation (depth) between proposed infiltration bed bottoms and either the seasonal high-water table (SHWT) and/or bedrock. Please consult with the project's geotechnical engineer and address 25 Pa Code §102.8(f)(12).
155. Please complete the Infiltration Information section (page 4) of PCSM Module 2. Added note referencing Attachment 3 may be relocated below check box stating that Soil/Geologic test results are attached, but the infiltration information must still be completed for each infiltration BMP per the Application Instructions. [25 Pa Code §102.8(f)(9)]
156. CCCD recommends additional plantings of deeper-rooted grasses or woody shrubs and trees for infiltration or bioretention BMPs with poor to moderate underlying infiltrate rates. CCCD recommends seeding with a combination of temporary and permanent stabilization (i.e. per the recommended seed mixes) and also includes plugs or containers within the infiltration area (trees and deep-rooted plants should be avoided in compacted fill berm areas and above pipe bedding). If additional plantings are proposed, please make sure to update the long-term O&M as necessary as well. [25 Pa Code §102.8(f)(9)]
157. Please update the infiltration berm cross-sections to be consistent with the plan views (i.e. proposed grades show a level area). [25 Pa Code §102.8(f)(9)]
158. Please provide more detail in the details for the proposed level spreader, and demonstrate it meets the guidance in both the PA SW BMP Manual and the E&S Manual. The plan view shows a stone hatch, which is inconsistent with the details in PCSM Sheet 5. [25 Pa Code §102.8(f)(9)]
159. CCCD recommends additional pre-treatment in infiltration BMPs that are directly downslope of gravel surfaces as they can be more prone to clogging/failure. It is recommended to identify the area between the infiltration surface and the gravel pad as a water quality BMP (i.e. vegetated filter strip) or to create a small forebay/collection area just upslope of the infiltration surface area that can be cleaned out more regularly. Please make all necessary changes, including changes to the long-term BMP to ensure the success of the planned BMPs. [25 Pa Code §102.8(m), §102.8(f)(10)]
160. The Sequence of PCSM BMP Installation on PCSM Sheet 4 references a u-drain in the proposed drainage berm; please clarify if an underdrain is proposed and make all necessary updates to the application materials to consistently show this information. [25 Pa Code §102.8(f)(9)]
161. Infiltration BMPs should be sited on uncompacted soils. Please add this requirement to the PCSM details (Protocol #2 in the Stormwater BMP manual). [25 Pa Code §102.11(a)(2)]

Additional Technical Deficiencies

162. If drilling fluid is going to be utilized during the removal/replacement of the 42-inch sacrificial pipe with the 30-inch carrier pipe under the Susquehanna River measures should be put in place to monitor fluid for the risk of an inadvertent return. Additionally, please provide details on any plans to fill the annular void space remaining as a result of the pipe replacement. [25 Pa Code §102.5(l)]
163. In addition to the deficiencies noted above DEP recommends the following:
- a. All recommendations presented within the Geological Hazard Assessment and Mitigation Plan should be followed. Primarily, a Geotech engineer should be onsite during construction in the areas where geohazard mitigation measures are recommended and where geohazards were identified. [25 Pa Code §102.5(l)]
  - b. Secondary containment should be installed around all stationary hydraulic equipment at the Trenchless Technology crossings. [25 Pa Code §102.5(l)]
  - c. For water supplies located within 450-feet of the trenchless centerline alignments: It is recommended that notifications and requests for permission to sample and test water supplies take place before starting site preparation work, including vegetation clearing. DEP recommends sampling for the following: Field Chemistry: Temperature, Conductivity, pH, Oxidation Reduction Potential, Total Dissolved Solids, Dissolved Oxygen, Turbidity. Microbiological: Total Coliform, E. Coli, Fecal Coliform. Inorganic: Nitrate, Alkalinity, Chloride, Hardness, Bromide, Sulfate, Total Dissolved Solids, Total Suspended Solids. Trace Metals: Barium, Calcium, Iron, Magnesium, Manganese, Potassium, Sodium, Strontium, Arsenic, Zinc, Aluminum, Lithium, Selenium. Organics: Methane, Ethane, Propane, Total Petroleum Hydrocarbons. [25 Pa Code §102.5(l)]
  - d. The Department recommends geo-tech borings to be installed whenever trenchless technology is utilized to cross a resource (i.e. Trout Brook in Luzerne County). [25 Pa Code §102.5(l)]

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 **March 8, 2022** or DEP may consider the application to be withdrawn by the applicant.

You may request a time extension in writing before **March 8, 2022** 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 shall be in accordance with 25 Pa. Code § 102.6(c).

Please submit 3 copies of the revised E&S plan and 3 copies of the revised PCSM plans to the Districts and an electronic copy of the revised information to the DEP.

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 Michael Luciani at 570-826-2597 or [mluciani@pa.gov](mailto:mluciani@pa.gov) and refer to Application No. ESG830021002-00, to discuss your concerns or to schedule a meeting. Please attempt to request a meeting within 15 days of the date of the letter to better ensure a meeting can be scheduled, held, and allow time for you to provide a response with the response time allotted for your reply.

You may also follow your application through the review process via *eFACTS on the Web* at: <http://www.ahs2.dep.state.pa.us/eFactsWeb/default.aspx>. (for individual permits only).

Sincerely,



Rebecca M. Albert, P.G.  
Environmental Group Manager  
Regional Permit Coordination Office

cc: Kevin C. Clark, P.E., BAI Group, LLC (by email)  
Luzerne Conservation District (by email)  
Monroe County Conservation District (by email)  
Northampton County Conservation District (by email)  
Bucks County Conservation District (by email)  
Chester County Conservation District (by email)  
York County Conservation District (by email)  
Buck Township (by email)  
Bear Creek Township (by email)  
Plains Township (by email)  
Jenkins Township (by email)  
Laflin Borough (by email)  
Wyoming Borough (by email)  
West Wyoming Borough (by email)  
Kingston Township (by email)  
Dallas Township (by email)  
Ross Township (by email)  
Chestnuthill Township (by email)  
Tunkhannock Township (by email)  
Lower Mount Bethel Township (by email)  
Lower Makefield Township (by email)

Ivyland Borough (by email)  
Marcus Hook Borough (by email)  
East Whiteland Township (by email)  
Peach Bottom Township (by email)  
Northeast Regional Waterways and Wetlands (by email)  
Southeast Regional Waterways and Wetlands (by email)  
Southcentral Regional Waterways and Wetlands (by email)