

## Erosion and Sedimentation Control Comments

### General

1. The E&S Plan must be separate from the PCSM Plan and labeled "E&S" or "Erosion and Sediment Control Plan" and be the final plan for construction. §102.4(5)(xiv). Please separate the E&S Plan from the PCSM Plan and label the E&S Plan according to the standards in Appendix D (page 397 of the E&SPC Manual, March 20912) first paragraph.
2. This is a proposed agricultural operation and a separate (Mushroom Farm/Farm) Environmental Management/Conservation Plan must be reviewed and approved by the Chester County Conservation District prior to the NPDES permit issuance. §102.4(c). Please contact our office for more information.
3. Add this note to the plan: Before initiating any revision to the approved erosion and sediment control plan or revisions to other plans which may affect the effectiveness of the approved E & S control plan, the operator must receive approval of the revisions from the Chester County Conservation District. The operator shall assure that the approved erosion and sediment control plan is properly and completely implemented. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to eliminate potential for accelerated erosion and/or sediment pollution. §102.4(5)(xiv).
4. Add this note to the plan: All pumping of sediment laden water or potentially sediment laden water shall be through a sediment control BMP, such as a pumped water filter bag discharging over non-disturbed areas. (Please show a detail of this facility on the detail sheet.). §102.4(5)(xiv).
5. Add this note to the plan: The contractor is advised to become thoroughly familiar with the provisions of the Appendix 64, Erosion Control rules and Regulations, Title 25, Part 1, Department of Environmental Protection, Subpart C, Protection of Natural Resources, Article III, Water Resources, Chapter 102, Erosion Control. §102.4(5)(xiv).
6. Add this note to the plan: The operator shall remove from the site, recycle, or dispose of all building materials and wastes in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., 271.1 et seq., and 287.1 et seq. The contractor shall not illegally bury, dump, or discharge any building material or wastes at the site. §102.4(5)(xi).
7. Add this note to the plan: A copy of the approved erosion and sediment control plan must be available at the project site at all times. Additionally, the operator shall assure that an erosion and sediment control plan has been prepared, and has been approved by the Chester County Conservation District and/or local municipality in Compliance with Chapter 102 Rules & Regulations, and is being implemented and maintained for all off site soil and/or rock spoil and/or borrow areas. §102.4(5)(xiv).

8. The E & S control plan mapping must display a PA ONE CALL SYSTEM INCORPORATED symbol including the site identification number. (This is a numbered symbol not a note.). §102.4(5)(x).

### **Plan Preparer §102.4(b)(3)**

9. Please provide information to show that the E&S Plan was prepared by a person trained and experienced in E&S control methods and techniques applicable to the size and scope of the project being designed. It is recommended that Standard E&S Worksheet # 22 (page 393 of the E&SPC Manual) be used for this purpose.

### **Topographic Features §102.4(b)(5)(i)**

10. Provide a topographic map for the proposed site that meets the standards on pages 397 and 398 of the E&SPC Manual. Cross-sections and profiles are not an acceptable alternative (Item 1, page 2 of the E&SPC Manual). §102.11(a)(1).
11. All plan drawings should be legible. Please revise sheet(s) (*indicate sheet numbers*) to conform to the standards in Appendix D (page 397 of the E&SPC Manual) first paragraph. §102.11(a)(1).
12. To avoid clutter, only information pertinent to the E&S plan should be shown on the E&S plan maps. All other information should be omitted (page 397 of the E&SPC Manual) first paragraph. §102.11(a)(1).
13. The scale of the plan maps should be large enough to clearly depict the topographic features of the site. Please revise (*indicate sheet numbers*) to conform to the standards in Appendix D (pages 397 and 398 of the E&SPC Manual). Request one overall E&S plan sheet and subsequent sheets to be 1" = 50' scale. §102.11(a)(1).
14. Please provide match lines for adjoining maps (page 397 of the E&SPC Manual). §102.11(a)(1).
15. Contours should be provided at an interval that adequately describes the topography of the site. A two foot interval is recommended (page 397 of the E&SPC Manual). §102.11(a)(1).
16. At a minimum, contours should be labeled in 10 foot increments (top of page 398 in the E&SPC Manual). §102.11(a)(1).
17. Indicate the type and extent of vegetative cover on the plan map(s) (page 357 of the E&SPC Manual). §102.11(a)(1).
18. Please show the existing riparian forest buffer indicated by the PCSM Plan as indicated at the bottom of page 398 the E&SPC Manual. §102.11(a)(1).
19. Please provide a separate drawing to include existing conditions. §102.11(a)(1).

20. All existing improvements (e.g. roads, buildings, and utilities) should be shown on the plan map(s) (pages 357 & 398 of the E&SPC Manual). §102.11(a)(1).
21. Sufficient surrounding area should be shown on the plan map(s) to identify tributary drainage areas and receiving watercourses. Where these features are beyond the coverage of the plan maps, they may be identified on the location map(s) (page 398 of the E&SPC Manual). §102.11(a)(1).
22. Please provide a (*mapping symbols legend, north arrow, graphic scale*) that conforms to the standards on page 397 of the E&SPC Manual. §102.11(a)(1).
23. Please provide a location map that conforms to the standards on page 397 of the E&SPC Manual. §102.11(a)(1).
24. Indicate the USGS quadrangle name(s) for the location map(s) (page 397 of the E&SPC Manual). §102.11(a)(1).
25. Please provide a contour plan sheet showing the drainage area during earth disturbance to each of the erosion control traps or basins. §102.11(a)(1).

### **Types, depth, slope, locations and limitations of the soils §102.3(b)(5)(ii)**

26. Please provide a soils map that meets the standards of page 397 of the E&SPC Manual. §102.11(a)(1).
27. Please indicate the use limitations of the soils pertinent to the proposed project as described in Item 2 on page 2 of the E&SPC Manual. §102.11(a)(1).
28. Describe how the identified soil use limitations have been addressed by the site design and/or E&S Plan (page 2 of the E&SPC Manual). §102.11(a)(1).
29. A check of the soil use limitations identified in the E&S plan found that the following limitations have not been addressed: (*indicate the soils or limitations not addressed*). Information regarding these limitations may be obtained from the websites provided in Item 2 on page 2 of the E&SPC Manual. §102.11(a)(1).

### **Characteristics of the earth disturbance activity §102.4(b)(5)(iii)**

30. Show the proposed NPDES (*ESCGP*) boundary on the plan map(s) (page 398 in the E&SPC Manual). This must include all proposed earthmoving as well as all proposed E&S BMPs and all structural PCSM BMPs. §102.11(a)(1).
31. Show the proposed limits of construction on the plan maps. All proposed earthmoving (including E&S BMPs and structural PCSM BMPs) must be within the limits of construction (Item 3 on page 2 and page 398 in the E&SPC Manual). §102.11(a)(1).
32. Please provide proposed final contours for all proposed earthmoving (including basins, traps, channels and PCSM BMPs) that meet the standards in Item 3 on page 2 and on page 398 in the E&SPC Manual. §102.11(a)(1).

33. Show all proposed waterways and stormwater management facilities on the plan maps (page 357 in the E&SPC Manual). §102.11(a)(1).
34. Show all proposed improvements (e.g. roads, buildings, utilities) on the plan map(s) (page 398 in the E&SPC Manual). §102.11(a)(1).
35. Provide station numbers for the proposed (*roadways, pipeline, sewer line, water line, stream channel relocation*) as described on 398 in the E&SPC Manual. §102.11(a)(1).
36. Describe the past, present, and proposed land uses for the site as described in Item 3 on page 2 of the E&SPC Manual. §102.11(a)(1).
37. Please provide an overall map of the proposed site showing how adjoining maps fit together as described on page 397 of the E&SPC Manual. §102.11(a)(1).
38. Show the location of the proposed riparian forest buffer described in the PCSM Plan (bottom of page 398 in the E&SPC Manual). §102.11(a)(1).
39. Please label all proposed BMPs as stated on page 398 of the E&SPC Manual. §102.11(a)(1).
40. Please provide a way of sediment-laden stormwater to reach the sediment basins and traps prior to the installation of the storm sewer system. This should be addressed on the plan mapping and in the sequence of construction. §102.11(a)(1).; §102.4(c).

#### **Volume and rate of runoff §102.4(b)(5)(iv)**

41. Please provide a copy of the work map used to delineate the watersheds tributary to the proposed (*channels, basins, traps*). These watersheds should be the maximum tributary to the facility as described on page 123 of the E&SPC Manual. §102.11(a)(1).
42. It does not appear that the watersheds tributary to the proposed (*indicate channels, basins, traps*) are the maximum tributary to the facility as described on page 123 of the E&SPC Manual. Please make all necessary corrections. §102.11(a)(1).
43. Show the offsite drainage area used to size (*indicate BMP*) on the USGS location map(s) as described on page 398 of the E&SPC Manual. §102.11(a)(1).
44. The plan map(s) show (*specify outfall, basin, or trap*) discharging to an area that is not identified as a surface water. If this is a non-surface water discharge, provide a discharge analysis that meets the standards of (*Item 4 on page 2, Item 15 on page 161*) of the E&SPC Manual. §102.11(a)(1).

#### **Surface waters of this Commonwealth §102.4(b)(5)(v)**

45. Show all existing surface waters (streams, wetlands, ponds, etc.) on the plan map(s) as described in Item 5 of pages 3 and 4 and on page 398 of the E&SPC Manual. §102.11(a)(1).

46. Show the FEMA floodway for (*indicate stream name*) in accordance with page 398 of the E&SPC Manual. §102.11(a)(1).
47. Identify the perennial and intermittent stream names as described on page 398 of the E&SPC Manual. §102.11(a)(1).
48. Indicate the existing/designated uses of the receiving streams as described in Item 5 on pages 3 and 4 of the E&SPC Manual. §102.11(a)(1).
49. Show the boundaries of the watershed for (*specify HQ or EV stream channel*) where the ABACT BMPs specified by the plan will be used (Item 5 on pages 3 and 4 of the E&SPC Manual). §102.11(a)(1). *Use this comment if only part of the project is in a special protection watershed.*
50. The soils map indicates the presence of potentially hydric soils on or adjacent to the site. Unless it can be shown that an earthmoving activity subsequent to the mapping has removed any potential for wetlands, a wetland determination should be done to determine if jurisdictional wetlands are present. If it is determined that jurisdictional wetlands are present, a delineation should be done to establish the boundaries of those wetlands. All delineated wetlands should be shown on the plan map(s). Please provide one copy of any wetland determination and/or delineation with your response to this letter (page 398 of the E&SPC Manual). §102.11(a)(1).
51. The wetlands shown on the plan map(s) do not conform to the delineation map (page 398 of the E&SPC Manual). §102.11(a)(1). Make all necessary corrections.
52. Please add this note: Seeps or springs encountered during construction shall be handled in accordance with the standard and specification for subsurface drain or other approved method. §102.11(a)(1).
53. The following note should appear on all E & S plans for projects in specially protected watersheds:
  - a. This project is in a specially protected High Quality or Exceptional Value watershed; extreme care should be exercised in all disturbance activities to prevent degradation to the Waters of the Commonwealth.
  - b. Because this project is in a specially protected High Quality or Exceptional Value watershed, upon completion or temporary cessation of earth disturbance activities, the project site must be immediately stabilized with the appropriate temporary or permanent stabilization. §102.4(5).
54. Please indicate whether your project discharges to Exceptional Value Wetlands as defined in Chapter 105.17.
55. Projects that discharge to Exceptional Value Wetlands as defined in Chapter 105.17 should be designed to HQ/EV anti-degradation standards for Erosion and Sedimentation Control and Post Construction Stormwater Management.

**Narrative description of location & type of perimeter & onsite BMPs  
§102.4(b)(5)(vi)**

56. Provide a brief description in the narrative of the proposed E&S BMPs to be used on this site (Item 6 on page 4 of the E&SPC Manual). §102.11(a)(1).  
*Use this comment where appropriate for non-permitted sites.*

### **Sequence of BMP installation and removal §102.4(b)(5)(vii)**

57. Installation of orange construction fencing to protect areas of proposed infiltration should be installed prior to any earth disturbance to prevent potential compaction. §102.4(b)(4)(ii).
58. Add this note to the sequence of the plan:
- a. All Earth Disturbance activities shall proceed in accordance with the following sequence. Each stage shall be completed before any following stage is initiated. Clearing and grubbing shall be limited only to those areas described in each stage.
  - b. An on-site pre-construction meeting is required to occur no less than 7-days prior to any earth disturbance unless notified otherwise by SERO DEP or the Chester County Conservation District. Permittees, co-permittees, operators, all appropriate municipal officials, representatives from the Chester County Conservation district and the SERO DEP, 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, shall attend a pre-construction meeting. §102.5(e).
59. Provide a site-specific sequence of BMP installation and removal in accordance with Chapter 2 of the E&SPC Manual. §102.11(a)(1).
60. A check of the plan map(s) found the following BMPs were not addressed by the BMP sequence: *(list items not contained in the sequence)*. Please see Chapter 2 of the E&SPC Manual for additional information. §102.11(a)(1).
61. The sequence calls for the installation of *(specify BMPs)*, which is not shown on the plan map(s). Please make all necessary corrections (see Chapter 2 in the E&SPC Manual). §102.11(a)(1).
62. Please indicate the specific BMPs to be installed prior to each step *(or stage)* of construction as described in Chapter 2 of the E&SPC Manual. §102.11(a)(1).
63. Please indicate the BMPs to be installed prior to general clearing and grubbing (see bottom of page 8 of the E&SPC Manual). §102.11(a)(1).
64. Please provide temporary stream crossings for the clearing and grubbing operations as indicated at the bottom of page 8 of the E&SPC Manual. §102.11(a)(1).
65. Describe how perimeter BMPs will be coordinated with clearing and grubbing (see top of page 9 in the E&SPC Manual). §102.11(a)(1).
66. Describe how the access roads for construction of *(specify basin, trap, channel, etc.)* will be stabilized (page 9 in the E&SPC Manual). Note: Access

- roads should be designed according to Chapter 3 of the manual.  
§102.11(a)(1).
67. The sequence indicates construction of (*specify channel or other BMP*) which would discharge to a proposed stormwater system which is not yet constructed. Please revise the sequence as necessary (page 9 in the E&SPC Manual). §102.11(a)(1).
  68. Describe how the base flow in (*indicate stream*) will be handled during the installation of (*specify item to be installed in/across stream channel*). See pages 42 through 48 of the E&SPC Manual for guidance regarding bypass structures. §102.11(a)(1).
  69. Describe how runoff will be directed away from the outslope(s) of the proposed fill(s). See pages 150 through 158 of the E&SPC Manual for guidance. §102.11(a)(1).
  70. Describe how runoff at the cut/fill interfaces will be handled (see bottom of page 9 in the E&SPC Manual). §102.11(a)(1).
  71. Address installation of proposed the sewer (*utility*) lines. The procedures used should meet the standards of Chapter 13 of the E&SPC Manual. §102.11(a)(1).
  72. As soon as slopes, channels, ditches, and other disturbed areas reach final grade, they must be stabilized (top of page 260 in the E&SPC Manual). §102.11(a)(1). This should be clearly stated in the sequence.
  73. Describe how disturbed areas will be minimized. The method(s) employed should conform to the standards on pages 10 and 262 of the E&SPC Manual. §102.11(a)(1).
  74. The sequence should specify stabilization of fill slopes in 15 to 25 foot vertical increments (page 265 of the E&SPC Manual). §102.11(a)(1).
  75. The sequence should specify that no more than 15,000 square feet of disturbed area reach final grade before initiating seeding and mulching operations (page 262 of the E&SPC Manual). §102.11(a)(1).
  76. The sequence should specify that cessation of activity for 4 days or longer requires temporary stabilization (page 260 of the E&SPC Manual). §102.11(a)(1).
  77. Describe the conditions of stabilization that will be achieved prior to removal/conversion of temporary E&S BMPs. For vegetated areas, the standard in the middle of page 10 of the E&SPC Manual should be used. §102.11(a)(1).
  78. Provide instructions for removal/conversion of the proposed sediment basin(s) (*traps*) to a stormwater management facility. See the bottom of page 10 in the E&SPC Manual for guidance. §102.11(a)(1).
  79. Specify critical stages when the licensed professional must be allowed to oversee installation structural PCSM BMP(s) as required by §102.8 (k).
  80. Describe how (*specify PCSM BMP*) will be protected from sedimentation until construction is completed and the site stabilized (see bottom of pages 10 and 262 in the E&SPC Manual). §102.11(a)(1).

81. Maintenance instructions should not be included in the sequence. See the last paragraph on page 10 of the E&SPC Manual for guidance on proper location of maintenance instructions. §102.11(a)(1).
82. It appears that note(s) from page 11 of the E&SPC Manual should be placed on one of the plan drawings. §102.11(a)(1).
83. Describe the procedure to be used while conducting earthwork within (*specify stream channel*). This guidance should meet the standards provided on pages 42 through 48 of the E&SPC Manual. §102.11(a)(1). It is recommended that you use a mini sequence located near detail (*specify detail number*) and refer to this mini sequence in the overall sequence.
84. The procedure for installing (*specify structure*) within (*specify stream channel*) does not meet the standards on pages 42 through 48 of the E&SPC Manual. §102.11(a)(1). Make all necessary corrections.
85. Describe the procedure to be used while conducting earthwork within (*specify lake or pond*). This guidance should meet the standards provided on pages 49 through 52 of the E&SPC Manual. §102.11(a)(1). It is recommended that you use a mini sequence located near detail (*specify detail number*) and refer to this mini sequence in the overall sequence.
86. The procedure for installing (*specify structure*) within (*specify lake or pond*) does not meet the standards on pages 49 through 52 of the E&SPC Manual. §102.11(a)(1). Make all necessary corrections.
87. The sequence should require that water pumped from work areas be treated for sediment removal prior to discharging to a surface water (page 53 of the E&SPC Manual). §102.11(a)(1).

### **Supporting calculations and measurements §102.4 (b)(5)(viii)**

#### Channels and Berms

88. Provide peak flow calculations for channel(s) (*specify channels*) See Chapter 5 in E&SPC Manual for guidance on runoff calculations. Standard E&S Worksheets #9 and #10 are recommended for the Rational Equation. An acceptable alternative is the use of the standard multipliers at the top of Standard E&S Worksheet #11. §102.11(a)(1).
89. Table 5.1 is not to be used for calculating peak channel flows. (See note at bottom of page 109 of the E&SPC Manual). Rainfall data should be obtained from the NOAA website provided on page 108 of the E&SPC Manual. §102.11(a)(1). Please revise the runoff calculations accordingly.
90. Sheet flow lengths used for determining Time of Concentration in the Rational Equation should conform to the guidance found near the middle of page 108 in the E&SPC Manual. §102.11(a)(1).
91. The runoff coefficients used in the Rational Equation should be taken from Table 5.2 of the E&SPC Manual. §102.11(a)(1).



92. Please provide the information requested by Standard E&S Worksheet #11 for all proposed channels. §102.11(a)(1).
93. Channel bed slopes may not be averaged (see Item 3 on page 129 of the E&SPC Manual). §102.11(a)(1).
94. The value of the roughness coefficient (n) used in Manning's equation should be varied according to type of liner and flow depth (see the bottom of page 129 in the E&SPC Manual). §102.11(a)(1). Make all necessary corrections.
95. For channels with bed slopes of 0.10 ft/ft or steeper, the protective liner should be analyzed using shear stress (see pages 129 and 130 of the E&SPC Manual). §102.11(a)(1).
96. A spot check of channel linings found that the anticipated shear stress exceeds the maximum permissible in Table 6.2 in the E&SPC Manual for one or more channels. §102.11(a)(1). Please make all necessary corrections.
97. A spot check of vegetated channels found one or more with anticipated velocity exceeding the maximum allowable from Table 6.4 in the E&SPC Manual. §102.11(a)(1). Make all necessary corrections.
98. The Manning's n value used for (*specify channel and temporary liner type*) does not conform to Table 6.5. Either show supporting evidence for the n value used or adjust the n value used to conform to Table 6.5. §102.11(a)(1).
99. A spot check of riprapped channels found one or more with an anticipated velocity exceeding the maximum shown in Table 6.6 of the E&SPC Manual. §102.11(a)(1). Make all necessary corrections.
100. The n value used for riprap channels should conform to Figure 6.2 in the E&SPC Manual. §102.11(a)(1).
101. A spot check of the proposed (*reno mattress, gabion*) channel found that the anticipated (*velocity, shear stress*) exceeds the maximum allowable shown in Table 6.10 of the E&SPC Manual. §102.11(a)(1).
102. Provide supporting calculations to show that the proposed berm(s) have sufficient capacity and adequate protective lining for the anticipated peak flow(s). You may use the same guidance as for channels from Chapter 6 of the E&SPC Manual. §102.11(a)(1).

#### Slope Pipes and Benches

103. Since proposed slope pipe (*indicate slope pipe number*) does not conform to Table 6.11, provide supporting calculations to show sufficient capacity of the pipe. §102.11(a)(1).
104. Due to soil conditions/anticipated peak flow, provide supporting calculations to show that the proposed protective liner is adequate. You may use the guidance for channel design from Chapter 6 of the E&SPC Manual. §102.11(a)(1).

#### Sediment Basins

105. Reductions (credits) have been taken for all proposed sediment basins. Please note that sediment basins in HQ/EV watersheds, 5000 cubic feet per acre settling volume is required and reductions cannot be taken. Please revise the basin calculations and drawings. §102.4(b)(5)(viii).
106. Please add a note in the construction staging requiring the basin to be stabilized and functioning properly prior to any further earth disturbance activities. Upon installation of the temporary sediment basin riser(s), an immediate inspection of the riser(s) shall be conducted by a qualified site representative and the Chester County Conservation District shall be notified in writing that the proper riser is installed and sealed, per plan. Sediment basins must be protected from unauthorized acts of third parties. §102.22(a).
107. Please include a note in the construction staging requiring a site inspection and approval by the Conservation District prior to removal or conversion of sediment traps and basins. §102.22(a)(1).
108. Please show erosion control blanket (ECB) on all swales and all sediment basin and trap berms. §102.22(a)(2).
109. Please provide the information requested by Standard E&S Worksheets #12 through #17 for all proposed sediment basins. §102.11(a)(1).
110. The minimum dewatering zone capacity for a sediment basin is 3,600 cubic feet per acre (after reductions, Item 6 on page 159 of the E&SPC Manual). §102.11(a)(1). Revise basin design accordingly.
111. The minimum surface area for a sediment basin should be calculated according to Item 7 (top of page 160 of the E&SPC Manual) unless an acceptable alternative (e.g. soil stabilizer, silt curtain, forebay, etc.) is employed. §102.11(a)(1). Revise as necessary.
112. A spot check of sediment basins found one or more where the dewatering time specified in Item 9 on page 160 of the E&SPC Manual is not provided. §102.11(a)(1). Please make the necessary changes.
113. A spot check of sediment basins found one or more where the required discharge capacity (see Item 12 on page 160 of the E&SPC Manual) is not provided. §102.11(a)(1). Revise as necessary.
114. One or more of the basins does not provide the freeboard required by Item 22 on page 162 of the E&SPC Manual. §102.11(a)(1). Make all necessary revisions.
115. A check of the skimmer for (*specify basin number*) found that the orifice diameter does not conform to Figure 7.2 on page 173 of the E&SPC Manual. §102.11(a)(1). Please correct the orifice diameter. Skimmers should be attached to a temporary or permanent riser that is calculated to handle the 2 cfs and not attached to an outflow pipe only.
116. The rule of thumb may not be used to determine the number of holes in the riser of a basin located in a Special Protection watershed (see page 174 of the E&SPC Manual). §102.11(a)(1).

117. The value of the C value used in the broad-crested weir equation should not exceed 2.8 for a sediment basin (see page 198 of the E&SPC Manual). §102.11(a)(1).
118. The required flow length to width ratio for (*indicate basin*) is not provided. See page 199 of the E&SPC Manual for guidance regarding calculation of required flow length. §102.11(a)(1).
119. Please use the guidance on pages 204 and 205 of the E&SPC Manual to determine the size, number, and spacing of anti-seep collars. §102.11(a)(1).

### Sediment Traps

120. Sediment traps should be sized according to Item 3 on page 212 of the E&SPC Manual. Revise the proposed traps accordingly. §102.11(a)(1).
121. The drainage area for (*insert trap number*) exceeds 5.0 acres. Revise as necessary (Item 1 on page 212 of the E&SPC Manual). §102.11(a)(1).
122. Provide calculations to show that (*insert trap number*) provides the required 2,000 cubic feet per acre storage capacity. §102.11(a)(1). Standard E&S Worksheet #14 is recommended for this purpose.
123. Trap surface areas should conform to Item 4 on page 213 E&SPC Manual unless acceptable alternatives are employed (e.g. soil stabilizer, silt curtain, forebay, etc.). §102.11(a)(1).,
124. Please provide the information requested by Standard E&S Worksheet #14. §102.11(a)(1).,

### Outlet Protection

125. Provide calculations to show the anticipated outlet velocity for each proposed outfall.
126. Figure 9.1 on page 231 of the E&SPC Manual should be used to adjust outlet velocity for less than full pipe flow. §102.11(a)(1).
127. Manning's equation (middle of page 229 of the E&SPC Manual) should be used to calculate discharge velocity for pipes with slopes of 0.05 ft/ft or steeper. §102.11(a)(1).
128. The discharge velocity for (*specify outlet number*) exceeds the maximum allowable for the riprap specified (see Table 6.6 in the E&SPC Manual). §102.11(a)(1). Revise as necessary.
129. The dimensions of the proposed stilling basin should be calculated according to the equations on page 247 of the E&SPC Manual. §102.11(a)(1).
130. Figures 9.3 and 9.4 should not be used to size outlet protection for box culverts (pages 239 and 240 of the E&SPC Manual). §102.11(a)(1).
131. The curves on Figures 9.3 and 9.4 should not be extrapolated (pages 239 and 240 of the E&SPC Manual). §102.11(a)(1). Revise the proposed apron dimensions accordingly.

132. It appears that the wrong figure was used to determine apron dimensions for (*specify riprap apron number*). Please refer to the guidance on minimum and maximum tailwater on page 241 of the E&SPC Manual and make all necessary corrections. §102.11(a)(1).
133. A spot check of the proposed flow transition mat found that the proposed length does not meet the requirements of Figure 9.6 in the E&SPC Manual. §102.11(a)(1). Revise as necessary.
134. The stone specified for stilling basin (*insert number*) does not meet the requirements of Figure 9.7. §102.11(a)(1). Make all necessary changes.
135. The dimensions of the proposed stilling well do not meet the standards of (*insert Figure 9.9 or 9.10*). §102.11(a)(1). Revise as necessary.
136. Provide calculations that show proposed energy dissipater (*insert number*) reduces the discharge velocity in the receiving channel to a non-erosive level. You may use the guidance in Item 15 on page 161 of E&SPC Manual. §102.11(a)(1).
137. The discharge from a sediment basin must flow to the waters of the Commonwealth or other approved alternative, and shall be designed, operated, and maintained without causing accelerated erosion or sedimentation. The Chester County Conservation District recommends a 50-foot buffer from the outlet to the Waters of the Commonwealth with proof of no accelerated erosion to the stream. Approved alternatives include stable constructed channels, storm sewers, and similar facilities that can accept the discharge with no erosion occurring.

If it is not feasible to discharge to the Waters of the Commonwealth, the following conditions should be met:

- a. A detail should be included showing the specific flow path for the discharge from the basin and a profile of this path.
- b. Incremental color photos should be included of the discharge area down to the receiving waterway.
- c. Calculations showing erosion will not occur based on the 2 cfs/tributary acre discharge from the sediment basin(s) or the maximum design discharge from sediment trap(s).
- d. An analysis should be provided demonstrating that the peak discharge of the 10 year 24 hour storm event from the permanent stormwater management basin/storm sewer outfall will not create accelerated erosion from the discharge point to a point at least 150' downstream.
- e. If there is a downslope landowner(s) an agreement should be made with the affected landowner(s) concerning the discharge from the basin or trap.
- f. A statement should be included on the plan that any damage that occurs as a result of the basin or trap discharge will be repaired in a permanent manner that is satisfactory to the municipality, conservation district and down slope landowner(s). §102.4(b)(6).

138. Provide calculations that show proposed structural level spreader (*insert number*) reduces the discharge velocity in the receiving flow path to a non-erosive level. §102.11(a)(1). You may use the guidance in Item 15 on page 161 and Appendix G of E&SPC Manual.

### **Plan drawings §102.4 (b)(5)(ix)**

#### Stabilized Construction Entrance

139. It appears that a stabilized construction entrance is needed at (*state location*). See pages 13 through 17 in the E&SPC Manual for guidance regarding stabilized construction entrances. §102.11(a)(1).
140. Since stabilized construction entrance (*specify RCE number*) is located in a special protection watershed, consideration should be given to whether a rock construction entrance with wash rack (see pages 15 and 16 of the E&SPC Manual) or wheel wash (see page 17 of the E&SPC Manual) is feasible. §102.11(a)(1). If neither of these is feasible you should contact (*insert DEP area engineer*) to discuss acceptable alternative measures.
141. Provide a typical detail for the proposed stabilized construction entrance(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). The detail(s) should conform to the specifications of (*insert Standard Construction Detail Number(s)*) found in Chapter 3 of the E&SPC Manual.
142. Detail (*specify detail number from plan drawing*) should conform to the standards shown in (*insert Standard Construction Detail Number(s)*) from Chapter 3 of the E&SPC Manual. §102.11(a)(1).

#### Compost Socks

143. Show all proposed compost sock locations on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
144. The plan map(s) show(s) compost sock(s) crossing contours at (*indicate location(s)*). 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. It is recommended that Figure 4.1 be placed upon a detail sheet for clarity.
145. The plan map(s) show(s) compost sock(s) located in concentrated flow (*specify location(s)*). Revise the location(s) to avoid concentrated flow (E&SPC Manual, page 62 and 67). §102.11(a)(1).
146. The plan map(s) show(s) compost sock(s) located on a constructed fill at (*specify location(s)*). Please relocate the sock below the fill to avoid failure of the sock (E&SPC Manual, page 65). §102.11(a)(1).
147. Please provide a summary table of the proposed compost socks, the percent slope, and slope length above the sock(s). Standard E&S Worksheet Number 1 is recommended for this purpose. §102.11(a)(1).

148. A spot check found maximum slope lengths exceeded at (*indicate location(s)*). Maximum slope lengths should conform to those provided in Figure 4.2 of the E&SPC Manual. §102.11(a)(1). Note: Similar figures based upon data from other states are not acceptable substitutes for Figure 4.2.
149. Provide a typical detail for the proposed compost sock(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Number #4-1 is recommended for this purpose.
150. The compost sock detail on the plan drawing(s) does not conform to the standards shown on Standard Construction Detail Number #4-1. §102.11(a)(1). Please make all necessary changes.
151. Add the notes in bold font on Standard Construction Detail Number #4-1 to the detail on the plan drawing(s). §102.11(a)(1).
152. Add Table 4.1 and Table 4.2 to the detail sheet(s). §102.11(a)(1). (*Note: provide the revised Table 4.2 in your comment letter.*)

### Compost Filter Berms

153. Show all proposed compost filter berm locations on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
154. The plan map(s) show(s) compost filter berm(s) crossing contours at (*indicate location(s)*). Sediment barriers should be installed at existing level grade (E&SPC Manual, page 70). §102.11(a)(1). Please make all necessary corrections. It is recommended that Figure 4.1 be placed upon a detail sheet for clarity.
155. The plan map(s) show(s) compost filter berm(s) located in concentrated flow (*specify location(s)*). Revise the location(s) to avoid concentrated flow (E&SPC Manual, page 67). §102.11(a)(1).
156. Please provide a summary table of the proposed compost filter berm, the percent slope, and slope length above the berm(s). §102.11(a)(1). Standard E&S Worksheet Number 2 is recommended for this purpose.
157. A spot check found maximum slope lengths above the proposed compost filter berm(s) are exceeded at (*indicate location(s)*). Maximum slope lengths should conform to those provided in Table 4.4 of the E&SPC Manual. §102.11(a)(1).
158. Multiple rows of compost socks do not address maximum slope length requirements (page 63 of the E&SPC Manual). §102.11(a)(1). Revise the proposed sock locations to meet slope length requirements.
159. Provide a typical detail for the proposed compost filter berm(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Number #4-2 is recommended for this purpose.
160. The compost filter berm detail on the plan drawing(s) does not conform to the standards shown on Standard Construction Detail Number #4-2. §102.11(a)(1); §102.11(a)(1). Please make all necessary changes.

161. Add the notes in bold font on Standard Construction Detail Number #4-2 to the detail on the plan drawing(s). §102.11(a)(1).

### Weighted Sediment Filter Tubes

162. Show all proposed weighted sediment filter tube locations on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
163. The plan map(s) show(s) weighted sediment filter tube(s) crossing contours at (indicate location(s)). Sediment barriers should be installed at existing level grade (E&SPC Manual, pages 70). §102.11(a)(1). Please make all necessary corrections. It is recommended that Figure 4.1 be placed upon a detail sheet for clarity.
164. A spot check found maximum slope lengths above the proposed weighted sediment filter tube(s) are exceeded at (indicate location(s)). Maximum slope lengths should conform to those provided in Table 4.4 or Figure 4.3 as described on page 69 of the E&SPC Manual. §102.11(a)(1).
165. Provide a typical detail for the proposed weighted sediment filter tube(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Number # (insert 4-3, 4-4, and/or 4-5 as appropriate) is recommended for this purpose.
166. The weighted sediment filter tube detail on the plan drawing(s) does not conform to the standards shown on Standard Construction Detail Number # (insert 4-3, 4-4, and/or 4-5 as appropriate). §102.11(a)(1). Please make all necessary changes.
167. Add the notes in bold font on Standard Construction Detail Number # (insert 4-3, 4-4, and/or 4-5 as appropriate) to the detail on the plan drawing(s). §102.11(a)(1).

### Silt Fencing

168. The use of silt fence and inlet protection as primary erosion and sediment pollution controls is not reliable. A more effective means should be explored. The District recommends utilizing perimeter controls to convey sediment-laden runoff to a sediment basin or trap.
169. Show all proposed silt fence locations on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). §102.11(a)(1).
170. The plan map(s) show(s) silt fence crossing contours at (indicate location(s)). 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. It is recommended that Figure 4.1 be placed upon a detail sheet for clarity.
171. The plan map(s) show(s) silt fence located in concentrated flow (specify location(s)). Revise the location(s) to avoid concentrated flow (E&SPC Manual, page 75). §102.11(a)(1).

172. The plan map(s) show(s) silt fence located on a constructed fill at (specify location(s)). Please relocate the fence below the fill to avoid failure of the fence (E&SPC Manual, page 75). §102.11(a)(1).
173. Please provide a summary table of the proposed silt fences, the percent slope, and slope length above the fence(s). §102.11(a)(1). Standard E&S Worksheet Number(s) (insert worksheet number(s)) is/are recommended for this purpose.
174. A spot check found maximum slope lengths exceeded at (indicate location(s)). Maximum slope lengths should conform to those provided in Table 4.4 or Figure 4.3 of the E&SPC Manual. §102.11(a)(1).
175. Slope length cannot be addressed by use of multiple rows of silt fence (page 76 of the E&SPC Manual). §102.11(a)(1). Make all necessary corrections.
176. Provide a typical detail for (each type of, the) silt fence (proposed) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Number(s) (insert Standard Construction Detail number(s)) are recommended for this purpose.
177. The (specify silt fence type) typical on the plan drawing(s) does/do not conform to the standards shown on (specify Standard Construction Detail number(s)). §102.11(a)(1). Please make all necessary changes.
178. The (specify silt fence type) typical on the plan drawing(s) does/do not include (all of) the bold font notes shown on (specify Standard Construction Detail number(s)). §102.11(a)(1). Please make all necessary changes.
179. Standard Construction Detail #4-6 should be added to the plan drawing(s). §102.11(a)(1).
180. The Rock Filter Outlet detail on (indicate drawing number) does not meet the standards of Standard Construction Detail #4-6. §102.11(a)(1). Revise as necessary.
181. Add the notes in bold font on Standard Construction Detail #4-6 to detail (specify detail number from plan drawings). §102.11(a)(1).
182. Silt fencing alone is not ABACT for HQ or EV watersheds. Please add a suitable BMP to the silt fence locations in (indicate watershed) to meet ABACT requirements. §102.11(a)(1).
183. Add Table 4.3 to the detail sheet(s). §102.11(a)(1).

#### Fiber Logs (Sediment Filter Logs)

184. Show all proposed fiber log locations on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
185. The plan map(s) show(s) fiber log(s) crossing contours at (*indicate location(s)*). Sediment barriers should be installed at existing level grade (E&SPC Manual, page 61). §102.11(a)(1). Please make all necessary corrections. It is recommended that Figure 4.1 be placed upon a detail sheet for clarity.



186. The plan map(s) show(s) a fiber log located in concentrated flow (*specify location(s)*). Revise the location(s) to avoid concentrated flow (E&SPC Manual, page 75). §102.11(a)(1).
187. A spot check found maximum slope lengths exceeded at (*indicate location(s)*). Maximum slope lengths should conform to those provided in Table 4.4 or Figure 4.3 as described on page 85 of the E&SPC Manual. §102.11(a)(1). Revise as necessary.
188. Provide a typical detail for the proposed fiber log(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Number #4-11 is recommended for this purpose.
189. The fiber log typical on the plan drawing(s) does not meet the standards shown on Standard Construction Detail Number #4-11. §102.11(a)(1). Please make all necessary changes.
190. Add the notes in bold font on Standard Construction Detail #4-11 to detail (*specify detail number from plan drawings*). §102.11(a)(1).
191. Fiber logs alone is not ABACT for HQ or EV watersheds. §102.11(a)(1). Please add a suitable BMP to the fiber log locations in (*indicate watershed*) to meet ABACT requirements.

#### Wood Chip Berms

192. Show all proposed wood chip berm locations on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
193. The plan map(s) show(s) wood chip berm(s) crossing contours at (*indicate location(s)*). Sediment barriers, including wood chip berms should be installed at existing level grade (E&SPC Manual, page 88). §102.11(a)(1). Please make all necessary corrections.
194. The plan map(s) show(s) a wood chip berm located in concentrated flow (*specify location(s)*). Revise the location(s) to avoid concentrated flow (E&SPC Manual, page 87). §102.11(a)(1).
195. A spot check found maximum slope lengths exceeded at (*indicate location(s)*). Maximum slope lengths should conform to those provided in Table 4.5 of the E&SPC Manual. §102.11(a)(1). Revise as necessary.
196. Provide a typical detail for the proposed wood chip berm(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Number #4-12 is recommended for this purpose.
197. The wood chip berm typical on the plan drawing(s) does not meet the standards shown on Standard Construction Detail Number #4-12. §102.11(a)(1). Please make all necessary changes.
198. Add the notes in bold font on Standard Construction Detail #4-12 to detail (*specify detail number from plan drawings*). §102.11(a)(1).
199. Wood chip berms alone are not ABACT for EV watersheds. Please add a suitable BMP to the wood chip berm locations in (*indicate watershed*) to meet ABACT requirements. §102.11(a)(1).

## Straw Bale Barriers

200. Show all proposed straw bale barrier locations on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
201. The plan map(s) show(s) straw bale barrier(s) crossing contours at (*indicate location(s)*). Sediment barriers should be installed at existing level grade (E&SPC Manual, page 90). §102.11(a)(1). Please make all necessary corrections. It is recommended that Figure 4.1 be placed upon a detail sheet for clarity.
202. The plan map(s) show(s) a straw bale barrier located in concentrated flow (*specify location(s)*). Revise the location(s) to avoid concentrated flow (E&SPC Manual, page 89). §102.11(a)(1).
203. A spot check found maximum slope lengths exceeded at (*indicate location(s)*). Maximum slope lengths should conform to those provided in Table 4.5 of the E&SPC Manual. §102.11(a)(1). Revise as necessary.
204. Slope length cannot be addressed by use of multiple rows of straw bales (page 89 of the E&SPC Manual). §102.11(a)(1). Make all necessary corrections.
205. Provide a typical detail for the proposed straw bale barrier(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Number #4-13 is recommended for this purpose.
206. The straw bale barrier typical on the plan drawing(s) does not meet the standards shown on Standard Construction Detail Number #4-12. §102.11(a)(1). Please make all necessary changes.
207. Add the notes in bold font on Standard Construction Detail #4-12 to detail (*specify detail number from plan drawings*). §102.11(a)(1).
208. Straw bale barriers alone are not ABACT for HQ or EV watersheds. §102.11(a)(1). Please add a suitable BMP to the straw bale barrier location(s) in (*indicate watershed*) to meet ABACT requirements.
209. Figure 4.4 should be added to a detail sheet to illustrate proper straw bale barrier installation. §102.11(a)(1).

## Rock Filters

210. Show all proposed rock filter locations on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
211. Provide a typical detail for the proposed rock filter(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Number #4-14 is recommended for this purpose.
212. The rock filter 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.

213. Add the notes in bold font on Standard Construction Detail #4-14 to detail (*specify detail number from plan drawings*). §102.11(a)(1).
214. Rock filters alone are not ABACT for HQ or EV watersheds. §102.11(a)(1). Please add a suitable BMP to the rock filter locations in (*indicate watershed*) to meet ABACT requirements.
215. Rock filters may not be used in lieu of suitable protective linings in channels or roadside ditches (page 92 of the E&SPC Manual). §102.11(a)(1). Revise channel/ditch design accordingly.
216. Rock filters should not be installed in channels less than 2 feet total depth (page 92 of the E&SPC Manual). §102.11(a)(1). Revise as necessary.
217. Complete the table for Standard Construction Detail Number #4-14. §102.11(a)(1).
218. The rock filter detail should be modified to meet ABACT requirements for (*specify stream channel*) which is (*insert HQ or EV*) (page 93 of the E&SPC Manual). §102.11(a)(1).

### Vegetative Filter Strips

219. Show all proposed vegetative filter strip locations on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
220. Provide a typical detail for the proposed vegetative filter strip(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Figure 4.5 may be modified for this purpose.
221. The vegetated filter strip typical on the plan drawing(s) does not meet the standards shown on page 95 of the E&SPC Manual. §102.11(a)(1). Please make all necessary changes.
222. Vegetative filter strips alone are not ABACT for EV watersheds. §102.11(a)(1). Please add a suitable BMP to the vegetative filter strip locations in (*indicate watershed*) to meet ABACT requirements.

### Channels

223. Show the location of all proposed channels on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
224. Channels should avoid sharp turns, high angles of confluence, and very low gradients (<1% bed slope). Revise the proposed channels to meet the specifications on page 127 of the E&SPC Manual. §102.11(a)(1).
225. Map/Sheet Number (*insert number*) shows a disturbed area above (*insert diversion channel number(s)*). Since diversions are intended to be clean-water channels, describe how (*insert channel number(s)*) will be protected from sediment pollution (see bottom of page 1 in the E&SPC Manual). §102.11(a)(1).
226. The plan map(s) show(s) (*specify channel number(s)*) located within grading areas. Consideration should be given to whether they can be

- relocated so they can function as intended without interfering with construction activities (see page 127 of E&SPC Manual for guidance on channel locations). §102.11(a)(1).
227. The plan map(s) show(s) disturbed areas below (*specify collector channel number(s)*). Describe how runoff will these areas will be treated for sediment removal prior to entering surface waters of this Commonwealth (see bottom of page 1 in the E&SPC Manual). §102.11(a)(1).
228. Describe how the discharge(s) from (*specify diversion or outlet channel number(s)*) will be safely conveyed to a surface water (see Item 4 on page 3 of E&SPC Manual). §102.11(a)(1).
229. Channels should be aligned so as to provide positive drainage throughout (page 127 of the E&SPC Manual). Revise channel alignments to avoid low points. Also provide revised contours for all channels (top of page 398 of the E&SPC Manual). §102.11(a)(1).
230. Channel(s) (*specify number(s)*) have bed slopes of less than 1%. This/These channel(s) should be realigned to avoid gradient problems (see page 127 in the E&SPC Manual). §102.11(a)(1).
231. Provide a typical detail for each type of channel proposed (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Number(s) (*insert Standard Construction Detail number(s)*) is/are recommended for this purpose.
232. The typical detail number(s) (*insert detail number(s)*) does not conform to the standards of Standard Construction Detail Number(s) (*insert Standard Construction Detail number(s)*). §102.11(a)(1). Make all necessary corrections.
233. The bold font notes below Standard Construction Detail Number(s) (*insert Standard Construction Detail number(s)*) should be added to the detail sheet(s). §102.11(a)(1).
234. For constructability, channel dimensions should be specified in 6-inch increments (page 142 of the E&SPC Manual). §102.11(a)(1).
235. A spot check of the channels found that the dimensions/protective lining specified for (*insert channel number(s)*) in the calculations is/are not consistent with that/those shown on the detail sheets (page 127 of the E&SPC Manual). §102.11(a)(1).
236. Please extend channels into the bottom of the basin and at least 10 feet beyond the toe of the slope of the berm. §102.11(a)(1).

### Sediment Basins

237. Show all proposed sediment basin locations on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
238. Sediment basin (*specify basin number*) is located within the drainage area of (*specify basin or trap number*). This configuration should be avoided wherever possible (Item 1 on page 159 of the E&SPC Manual) unless it can

- be shown that it is necessary for the PCSM plan and all impoundments within the chain are properly sized for storage and discharge capacities. §102.11(a)(1). Make all necessary changes.
239. Sediment basins may not be located in live stream channels or wetlands (Item 1 on page 159 of the E&SPC Manual). §102.11(a)(1). Basin (*specify basin number*) should be relocated.
240. A spot check found that the design bottom elevation of Basin (*specify basin number*) is below (*the seasonal high water table, the adjacent wetland, perennial stream (insert stream name)*). This basin should be redesigned to conform to Item 1 on page 159 of the E&SPC Manual. §102.11(a)(1).
241. Describe how sediment basin (*insert basin number*) will be accessed. This access should conform to the requirements of Item 3 on page 159 of the E&SPC Manual. §102.11(a)(1). Only limited clearing and grubbing is permitted for access to basin and trap installations. Please specify this in the sequence and show the access roads on the plan view. Additionally, if cut/fill does not balance for these installations, clear spoil or borrow areas should be identified. Consider soil types for berm compaction when locating a borrow area.
242. Sediment basins should not be located within the proposed grading area since this would negate the purpose of the basin being used over the life of the project (item 5 on page 159 of the E&SPC Manual). Basin (*specify basin number*) should be relocated outside the proposed grading area. §102.11(a)(1).
243. Provide a construction detail showing proposed contours, spillway locations, (baffle/silt curtain locations), and clean-out stake location for basin (*specify basin number*) on a detail sheet (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
244. Please add the embankment compaction standards contained in Item 20 on page 162 of the E&SPC Manual to the detail sheet with the basin details. §102.11(a)(1).
245. The embankment for basin (*insert basin number*) does not meet the standards of Item 21 on page 162 of the E&SPC Manual. Please revise the design of this basin and any others which do not meet this specification. §102.11(a)(1).
246. Provide construction details for the proposed spillway/dewatering system for basin(s) (*specify basin number(s)*) on a detail sheet (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Number(s) (*insert Standard Construction Detail number(s)*) is/are recommended for this purpose.
247. Skimmer/perforated riser detail number(s) (*insert number(s) from detail sheet*) do/does not conform to the standards on Standard Construction Detail Number(s) (*insert Standard Construction Detail number(s)*). §102.11(a)(1).
248. Complete the table(s) in Standard Construction Detail Number(s) (*insert Standard Construction Detail number(s)*). §102.11(a)(1).

249. A spot check of the table(s) in Standard Construction Detail Number(s) (*insert Standard Construction Detail number(s)*) found them to be inconsistent with the supporting calculations. Make all necessary corrections. §102.11(a)(1).
250. The notes in bold font in Standard Construction Detail Number(s) (*insert Standard Construction Detail number(s)*) should be added to the detail sheet(s). §102.11(a)(1).
251. Provide a detail for the proposed temporary extension of the permanent riser in basin (*specify basin number*) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #7-10 is recommended for this purpose.
252. The detail for the proposed temporary extension of the permanent riser in basin (*specify basin number*) does not conform to the standards in Standard Construction Detail #7-10. §102.11(a)(1). Make all necessary corrections.
253. The notes in bold font below Standard Construction Detail #7-10 should be added to the detail sheet. §102.11(a)(1).
254. Provide a detail for the proposed dry basin temporary riser (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #7-11 is recommended for this purpose.
255. The detail for the proposed dry basin temporary riser in basin (*specify basin number*) does not conform to the standards in Standard Construction Detail #7-11. §102.11(a)(1). Make all necessary corrections.
256. The notes in bold font below Standard Construction Detail #7-11 should be added to the detail sheet. Include the one at the top of page 192. §102.11(a)(1).
257. All sediment basins should be provided with an emergency spillway (page 192 of the E&SPC Manual) unless an alternative design has been approved by DEP. §102.11(a)(1). Make all necessary corrections.
258. Provide a construction detail for the emergency spillways (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #s 7-12 and 7-13 are recommended for this purpose.
259. The emergency spillway detail(s) on sheet(s) (*indicate detail sheet number(s)*) does/do not conform to the standards of Standard Construction Detail Number (*insert Standard Construction Detail number(s)*). §102.11(a)(1). Make all necessary corrections.
260. Complete the table(s) for Standard Construction Detail Number (*insert Standard Construction Detail number(s)*). §102.11(a)(1).
261. A spot check of the table(s) in Standard Construction Detail Number(s) (*insert Standard Construction Detail number(s)*) found them to be inconsistent with the supporting calculations. §102.11(a)(1). Make all necessary corrections.
262. Provide a construction detail for the proposed forebay in basin (*insert basin number*) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Figure 7.4 may be modified to show dimensions, elevations and materials.

263. Provide a construction detail for the proposed baffles (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Number 7-14 is recommended for this purpose.
264. The detail (*insert detail number*) for the proposed baffle in basin (*insert basin number*) does not conform to the standards in Standard Construction Detail Number 7-14. §102.11(a)(1). Make all necessary corrections.
265. Complete the table for Standard Construction Detail #7-14. §102.11(a)(1).
266. Add the notes in bold font below Standard Construction Detail #7-14 to the detail sheet. §102.11(a)(1).
267. A spot check of the baffle in basin (*insert basin number*) found that it would not provide the required flow length to width ratio. Please realign this baffle to conform to the guidance on pages 199 and 200 of the E&SPC Manual. §102.11(a)(1).
268. Provide a detail for the proposed anti-seep collar(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Numbers 7-15 and 7-16 are recommended for this purpose.
269. Complete the table for Standard Construction Detail #7-15/16. §102.11(a)(1).
270. Add the notes in bold font below Standard Construction Detail #7-15/16 to the detail sheet. §102.11(a)(1).
271. A spot check of the table for Standard Construction Detail #7-15/16 found that it is inconsistent with the supporting calculations. §102.11(a)(1). Please make all necessary corrections.
272. Provide a construction detail for the proposed Filter Diaphragm (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Figure 7.8 may be modified to show dimensions and elevations for this purpose.
273. The construction detail for the proposed Filter Diaphragm does not meet the standards shown in Figure 7.8. §102.11(a)(1). Make all necessary corrections.
274. Provide a construction detail for the proposed concrete cradle (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Number 7-17 is recommended for this purpose.
275. The construction detail for the proposed concrete cradle does not meet the standards shown in Standard Construction Detail Number 7-17. §102.11(a)(1). Make all necessary corrections.
276. Add the notes in bold font below Standard Construction Detail #7-17 to the detail sheet. §102.11(a)(1).
277. Provide a construction detail for the proposed sediment storage zone dewatering facility (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Number 7-18 is recommended for this purpose.
278. The construction detail for the proposed sediment storage zone dewatering facility does not meet the standards shown in Standard

- Construction Detail Number 7-18. §102.11(a)(1). Make all necessary corrections.
279. Add the notes in bold font below Standard Construction Detail #7-18 to the detail sheet. §102.11(a)(1).

### Sediment Traps

280. Show all proposed sediment trap locations on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
281. The plan map(s) show sediment trap (*specify trap number*) within the proposed grading area. Please relocate the trap to below the disturbed area (page 212 of the E&SPC Manual). §102.11(a)(1).
282. Describe how the trap will be accessed (page 212 of the E&SPC Manual). Any access roads should conform to the standards in Chapter 3. §102.11(a)(1).
283. Map (*specify map number*) shows a (*sewer line, utility line, roadway, other*) intersecting trap number (*insert trap number*). Relocate as necessary to avoid this problem (page 212 of the E&SPC Manual). §102.11(a)(1).
284. The plan map(s) show(s) trap number (*insert trap number*) located on a steep slope. Describe how failure of this trap will be avoided (page 212 of the E&SPC Manual). §102.11(a)(1).
285. Sediment traps may not be located in live stream channels or wetlands (page 212 of the E&SPC Manual). §102.11(a)(1). Trap(s) (*insert trap number*) should be relocated.
286. A spot check of trap (*specify trap number*) found that it would not provide the required flow length to width ratio (Item 7 on page 213 of the E&SPC Manual). §102.11(a)(1). Revise as necessary.
287. Trap (*specify trap number*) would not provide the required minimum 2.0 foot storage depth (Item 9 on page 213 of the E&SPC Manual). §102.11(a)(1). Please make the necessary corrections.
288. The constructed embankment height of temporary sediment trap (*specify trap number*) exceeds the maximum of 5.0 feet (Item 11 on page 213 of the E&SPC Manual). §102.11(a)(1). Make all necessary corrections.
289. The embankment top width for trap (*specify trap number*) is less than the minimum 5.0 feet (Item 12 on page 213 of the E&SPC Manual). §102.11(a)(1). Revise as necessary.
290. The embankment (inside/outside) slope for trap (*specify trap number*) exceeds the 2H:1V maximum (Item 13 on page 213 of the E&SPC Manual). §102.11(a)(1). Revise as necessary.
291. The embankment of trap (*specify trap number*) does not provide the required minimum 12 inches of freeboard above the maximum design water level. §102.11(a)(1). Make all necessary corrections.



292. Provide a construction detail for proposed compost sock trap (*specify trap number*) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #3-11 is recommended for this purpose.
293. The construction detail for compost sock trap (*specify trap number*) does not meet the standards of Standard Construction Detail #3-11. §102.11(a)(1). Make all necessary corrections.
294. Add the notes in bold font below Standard Construction Detail #3-11 (page 35 of the E&SPC Manual) to the detail sheet. §102.11(a)(1).
295. Provide a construction detail for proposed embankment sediment trap (*specify trap number*) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #8-1 is recommended for this purpose.
296. The construction detail for embankment sediment trap (*specify trap number*) does not meet the standards of Standard Construction Detail #8-1. §102.11(a)(1). Make all necessary corrections.
297. Add the notes in bold font below Standard Construction Detail #8-1 (pages 215 and 216 of the E&SPC Manual) to the detail sheet. §102.11(a)(1).
298. Complete the table for Standard Construction Detail #8-1. §102.11(a)(1).
299. Provide a construction detail for the proposed barrel/riser sediment trap (*specify trap number*) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #8-2 is recommended for this purpose.
300. The construction detail for barrel/riser sediment trap (*specify trap number*) does not meet the standards of Standard Construction Detail #8-2. §102.11(a)(1). Make all necessary corrections.
301. Add the notes in bold font below Standard Construction Detail #8-2 (pages 218 and 219 of the E&SPC Manual) to the detail sheet. §102.11(a)(1).
302. Complete the table for Standard Construction Detail #8-2. §102.11(a)(1).
303. Provide a construction detail for the proposed sediment trap (*specify trap number*) riser (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #8-3 is recommended for this purpose.
304. The construction detail for sediment trap (*specify trap number*) riser does not meet the standards of Standard Construction Detail #8-3. §102.11(a)(1). Make all necessary corrections.
305. Add the notes in bold font below Standard Construction Detail #8-3 (page 220 of the E&SPC Manual) to the detail sheet. §102.11(a)(1).
306. Complete the table for Standard Construction Detail #8-3. §102.11(a)(1).
307. Provide a cross-section detail for proposed sediment trap (*specify trap number*) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #8-4 is recommended for this purpose.
308. The cross-section detail for sediment trap (*specify trap number*) does not meet the standards of Standard Construction Detail #8-4. §102.11(a)(1). Make all necessary corrections.

309. Add the notes in bold font below Standard Construction Detail #8-4 (pages 221 and 222 of the E&SPC Manual) to the detail sheet. §102.11(a)(1).
310. Complete the table for Standard Construction Detail #8-4. §102.11(a)(1).
311. Provide a construction detail for the proposed dry sediment trap (*specify trap number*) riser (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #8-5 is recommended for this purpose.
312. The construction detail for the dry sediment trap (*specify trap number*) riser does not meet the standards of Standard Construction Detail #8-5. §102.11(a)(1). Make all necessary corrections.
313. Add the notes in bold font below Standard Construction Detail #8-5 (pages 223 and 224 of the E&SPC Manual) to the detail sheet. §102.11(a)(1).
314. Complete the table for Standard Construction Detail #8-5. §102.11(a)(1).
315. Provide a construction detail for the proposed sediment trap (*specify trap number*) outlet basin (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #8-6 is recommended for this purpose.
316. The construction detail for the sediment trap (*specify trap number*) outlet basin does not meet the standards of Standard Construction Detail #8-6. §102.11(a)(1). Make all necessary corrections.
317. Add the notes in bold font below Standard Construction Detail #8-6 (page 225 of the E&SPC Manual) to the detail sheet. §102.11(a)(1).
318. Provide a construction detail for proposed type M inlet sediment trap (*specify trap number*) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #8-7 is recommended for this purpose.
319. The construction detail for type M inlet sediment trap (*specify trap number*) does not meet the standards of Standard Construction Detail #8-7. §102.11(a)(1). Make all necessary corrections.
320. Add the notes in bold font below Standard Construction Detail #8-7 (page 226 of the E&SPC Manual) to the detail sheet. §102.11(a)(1).
321. Complete the table for Standard Construction Detail #8-7. §102.11(a)(1).
322. Provide a construction detail for the proposed concrete sediment trap (*specify trap number*) riser (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #8-8 is recommended for this purpose.
323. The construction detail for the concrete sediment trap (*specify trap number*) riser does not meet the standards of Standard Construction Detail #8-8. §102.11(a)(1). Make all necessary corrections.
324. Add the notes in bold font below Standard Construction Detail #8-8 (pages 227 and 228 of the E&SPC Manual) to the detail sheet. §102.11(a)(1).
325. Complete the table for Standard Construction Detail #8-8. §102.11(a)(1).

#### Outlet Protection

326. Show all proposed pipe outfall locations and outlet protection on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
327. Provide suitable outlet protection for (*indicate outlet number*) (top of page 229 in the E&SPC Manual). §102.11(a)(1).
328. The pipe outfall and outlet protection for (*indicate outlet number*) should be oriented so that the discharge enters the receiving channel at an angle less than 90 degrees (page 232 of the E&SPC Manual). §102.11(a)(1).
329. A spot check of (*specify outlet number*) found that there is not sufficient room to construct the (*apron, transition mat, stilling basin, etc.*) to the dimensions specified on the detail sheet. §102.11(a)(1).
330. Provide a construction detail for each type of riprap apron proposed (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail Numbers 9-1, 9-2, and 9-3 are recommended for this purpose.
331. The construction detail(s) for the proposed riprap apron(s) do/does not conform to the standards of (*specify Standard Construction Detail Number(s)*). §102.11(a)(1).
332. Add the notes in bold font below Standard Construction Detail (*specify detail number*) in the E&SPC Manual to the detail sheet. §102.11(a)(1).
333. Complete the table for Standard Construction Detail (*specify detail number*). §102.11(a)(1).
334. Provide a construction detail for the proposed flow transition mat. §102.11(a)(1). Figure 9.5 in the E&SPC Manual may be modified as necessary to do so.
335. Provide a construction detail for the proposed stilling basin (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #9-4 is recommended for this purpose.
336. The construction detail for the proposed stilling basin does not meet the standards of Standard Construction Detail #9-4. §102.11(a)(1). Revise as necessary.
337. Add the note in bold font below Standard Construction Detail #9-4 in the E&SPC Manual to the detail sheet. §102.11(a)(1).
338. Complete the table for Standard Construction Detail #9-4. §102.11(a)(1).
339. Provide a construction detail for the proposed stilling well. §102.11(a)(1). Figure 9.8 in the E&SPC Manual may be modified as necessary to do so.
340. Provide a construction detail for proposed energy dissipater (*insert number*) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
341. Provide a construction detail for the proposed drop structure (Item 9, page 5 of the E&SPC Manual) 102.11(a)(1). Figure 9.11 in the E&SPC Manual may be modified as necessary to do so.
342. The proposed earthen level spreader does not meet the specifications on page 253 of the E&SPC Manual. §102.11(a)(1). Consideration should be given to another means of conveying the discharge from (*specify pipe or channel number*) to a receiving surface water.

343. Provide a construction detail for the proposed earthen level spreader (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #9-5 is recommended for this purpose.
344. Provide a construction detail for the proposed structural level spreader (Item 9, page 5 of the E&SPC Manual) 102.11(a)(1). Guidance regarding design of structural level spreaders may be found in Appendix G of the E&SPC Manual.

### Inlet Protection

345. Inlet protection should be provided wherever the stormwater system does not discharge into a functioning sediment basin or sediment trap (page 96 of the E&SPC Manual). §102.11(a)(1).
346. Show all proposed inlet protection on the plan map(s) (Item 9, page 5 of the E&SPC Manual) 102.11(a)(1).
347. Inlet protection should not be installed on catch basins located near the edges of fill slopes. Consideration should be given to treating the runoff at the discharge end of the system (page 96 of the E&SPC Manual). §102.11(a)(1).
348. Silt fence and straw bale barriers should not be used as inlet protection (page 96 of the E&SPC Manual). §102.11(a)(1). See pages 97 through 107 for guidance regarding acceptable methods of inlet protection.
349. Provide typical details for the proposed inlet filter bag(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Details #4-15 and 4-16 are recommended for this purpose.
350. The inlet filter bag detail(s) does/do not meet the standards of Standard Construction Detail(s) # (*insert 4-15 and/or 4-16*). §102.11(a)(1). Please make the necessary corrections.
351. Add the notes in bold font below Standard Construction Detail(s) # (*insert 4-15 and/or 4-16*) in the E&SPC Manual to the detail sheet. §102.11(a)(1).
352. Provide typical details for the proposed concrete block and stone inlet protection (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Details #4-17 and 4-18 are recommended for this purpose.
353. The concrete block and stone inlet protection detail(s) does/do not meet the standards of Standard Construction Detail(s) # (*insert 4-17 and/or 4-18*). §102.11(a)(1). Please make the necessary corrections.
354. Add the notes in bold font below Standard Construction Detail(s) # (*insert 4-17 and/or 4-18*) in the E&SPC Manual to the detail sheet. §102.11(a)(1).
355. Provide typical details for the proposed stone inlet protection (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Details #4-19 through 4-23 are recommended for this purpose.
356. The stone inlet protection detail(s) does/do not meet the standards of Standard Construction Detail(s) # (*insert 4-19 and/or 4-20 through 4-23*). §102.11(a)(1). Please make the necessary corrections.

357. Add the notes in bold font below Standard Construction Detail(s) # (*insert 4-19 and/or 4-20 through 23*) in the E&SPC Manual to the detail sheet. §102.11(a)(1).

## **Other BMPs**

### Access Roads

358. Show all proposed temporary (if known) and permanent access roads on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). See Chapter 3 beginning on page 18 of the E&SPC Manual for guidance on access roads.
359. Access roads should be located above flood plains and avoid drainage courses wherever possible or have proper drainage measures installed (page 18 of the E&SPC Manual). §102.11(a)(1). Revise the access road layout(s) as necessary.
360. Provide a suitable temporary crossing for the proposed access road at (*specify surface water crossing*) (page 18 of the E&SPC Manual). §102.11(a)(1).
361. Ford type stream crossings should not be used for construction traffic (page 18 of the E&SPC Manual). §102.11(a)(1). Please refer to pages 36 through 40 of the manual for guidance regarding acceptable stream crossings.
362. Provide typical details for the proposed access road(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Details #3-3 and 3-4 are recommended for this purpose.
363. The typical access road detail(s) does/do not meet the standards of Standard Construction Detail(s) # (*insert 3-3 and/or 3-4*). §102.11(a)(1). Please make the necessary corrections.
364. Add the notes in bold font below Standard Construction Detail(s) # (*insert 3-3 and/or 3-4*) in the E&SPC Manual to the detail sheet. §102.11(a)(1).

### Waterbars

365. Show the proposed waterbars on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
366. Waterbars are not recommended for active access roads (page 21 of the E&SPC Manual). §102.11(a)(1). Consideration should be given to the BMPs described on pages 23 through 29 of the manual until the access road is retired.
367. Provide a standard detail for the proposed waterbar(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #3-5 is recommended for this purpose.

368. The waterbar detail does not meet the standards of Standard Construction Detail #3-5. §102.11(a)(1). Please make all necessary corrections.
369. Add the notes in bold font below Standard Construction Detail #3-5 to the detail sheet. §102.11(a)(1).
370. The proposed waterbar spacing does not meet the standards of Table 3.1 in the E&SPC Manual. §102.11(a)(1). Either revise the proposed spacing or provide supporting calculations to show that the proposed spacing will be sufficient.

#### Broad-based Dips

371. Show the proposed broad-based dips on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
372. Provide a standard detail for the proposed broad-based dip(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #3-6 or 3-7 is recommended for this purpose.
373. The broad-based dip detail does not meet the standards of Standard Construction Detail #3-6 or 3-7. §102.11(a)(1). Please make all necessary corrections.
374. Add the notes in bold font below Standard Construction Detail # (*insert 3-6 and/or 3-7*) to the detail sheet. §102.11(a)(1).
375. The proposed broad-based dip spacing does not meet the standards of Table 3.2 in the E&SPC Manual. §102.11(a)(1). Either revise the proposed spacing or provide supporting calculations to show that the proposed spacing will be sufficient.

#### Open-top Culverts

376. Show the proposed open-top culvert(s) on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
377. Provide a standard detail for the proposed open-top culvert(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #3-8 is recommended for this purpose.
378. The open-top culvert detail does not meet the standards of Standard Construction Detail #3-8. §102.11(a)(1). Please make all necessary corrections.
379. Add the notes in bold font below Standard Construction Detail # 3-8 to the detail sheet. §102.11(a)(1).
380. The proposed open-top culvert spacing does not meet the standards of Table 3.2 in the E&SPC Manual. §102.11(a)(1). Either revise the proposed spacing or provide supporting calculations to show that the proposed spacing will be sufficient.

#### Water Deflector

381. Show the proposed water deflector(s) on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Installation of earthen, stone, and asphalt inlet berms until the streets receive the final wearing course have not been addressed on the plan and sequence.
382. Provide a standard detail for the proposed water deflector(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #3-9 is recommended for this purpose.
383. The water deflector detail does not meet the standards of Standard Construction Detail #3-9. §102.11(a)(1). Please make all necessary corrections.
384. Add the notes in bold font below Standard Construction Detail # 3-9 to the detail sheet. §102.11(a)(1).
385. The proposed water deflector spacing does not meet the standards of Table 3.2 in the E&SPC Manual. §102.11(a)(1). Either revise the proposed spacing or provide supporting calculations to show that the proposed spacing will be sufficient.

#### Roadside Ditch

386. Show the proposed roadside ditch(es) on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
387. Provide a standard detail for the proposed roadside ditch(es) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Figure 3.1 may be modified for this purpose.
388. The roadside ditch detail does not meet the standards of Figures 3.1 and 3.2. §102.11(a)(1). Please make all necessary corrections.
389. It is recommended that Figure 3.2 be added to a detail sheet. §102.11(a)(1).

#### Ditch Relief Culverts (Cross Drains)

390. Consideration should be given to the use of ditch relief culverts to minimize flow in the roadside ditch(es). See pages 31 and 32 in the E&SPC Manual for guidance on ditch relief culverts. §102.11(a)(1).
391. Show the location(s) of the proposed ditch relief culvert(s) on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
392. Provide a construction detail for the proposed ditch relief culvert(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #3-10 is recommended for this purpose.
393. The construction detail for the proposed ditch relief culvert does not meet the standards of Standard Construction Detail #3-10. §102.11(a)(1). Please make all necessary corrections.

394. The spacing of the proposed ditch relief culverts does not conform to Table (*insert 3.3 for temporary culverts or 3.4 for permanent culverts*). §102.11(a)(1). Either revise the spacing or provide calculations to show that the proposed spacing is sufficient.

### Turnouts

395. Show the location(s) of the proposed turnout(s) on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Consideration should be given to the use of turnouts to minimize flow in the roadside ditch(es). See page 33 in the E&SPC Manual for guidance on turnouts.
396. Provide a construction detail for the proposed turnout(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Figure #3.3 may be modified for this purpose.
397. The construction detail for the proposed turnout does not meet the standards of page 33 of the E&SPC Manual. §102.11(a)(1). Please make all necessary corrections.

### Temporary Stream and Wetland Crossings

398. Provide a temporary crossing for construction equipment (including clearing and grubbing operations) where needed on (*specify stream or wetland*) (page 36 in the E&SPC Manual). §102.11(a)(1). See pages (*insert 36 through 40 for stream crossings and/or 41 to 42 for wetland crossings*) in the E&SPC Manual for guidance on crossings.
399. Show the location(s) of the proposed (*insert stream and/or wetland*)(s) on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
400. Provide a construction detail for the proposed (*insert stream and/or wetland*) crossing(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). (*Insert Standard Construction Detail #3-12, 13, 14 and/or Figure 3.4, 3.5, 3.6 or 3.7 as appropriate*) may be (*insert used or modified*) for this purpose.
401. The construction detail(s) for the proposed (*insert stream and/or wetland*) crossing(s) do/does not meet the standards of pages (*insert 36 through 40 and/or 41 and 42*) of the E&SPC Manual. §102.11(a)(1). Please make all necessary corrections.

### Earthwork within Surface Waters

402. Consideration should be given to the use of a causeway for the in-channel work (*insert location and/or stream name*). See pages 42 and 43 of the E&SPC Manual for guidance on the use of causeways. §102.11(a)(1). **Note: The appropriate Chapter 105 permit must be obtained from DEP before this work can begin. Designs must adhere to the conditions of that permit.** (*Use this note with other comments as appropriate.*)



403. Show the location of the proposed causeway on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
404. Provide a construction detail for the proposed causeway (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Figure 3.8 may be used for this purpose.
405. Provide a construction detail for the proposed bypass (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Figure (*insert 3.9, 3.10, 3.11, and/or 3.12 as appropriate*) may be used for this purpose.
406. Detail (*insert detail number from plans*) does not meet the standards of (*insert Figure 3.9, 3.10, 3.11, or 3.12*). §102.11(a)(1). Revise as necessary.
407. Provide a construction detail for the proposed cofferdam (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #3-15 or Figure 3.13 may be used for this purpose.
408. Show the location of the proposed turbidity barrier (*or silt curtain*) on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
409. Provide a construction detail for the proposed turbidity barrier (*or silt curtain*) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Figure (*insert 3.14, 3.15, 3.16, or 3.17 as appropriate*) may be modified for this purpose. Include the curtain height, and details showing how it will be attached to support posts at the end of the curtain.

#### Clean Fill

410. Please add this note: The contractor is responsible for ensuring that any material brought on site is Clean Fill. Form FP-001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as Clean Fill due to analytical testing. §102.4(b)(xi).
411. Please add this note: Sediment tracked onto any roadway or sidewalk shall be returned to the construction site by the end of each workday and disposed as a manner described in this plan. In no case shall the sediment be washed, shoveled or swept into any road side ditch, storm sewer or surface water. §102.11(a)(1).

#### Dewatering Work Areas

412. Show the location(s) of the proposed (*insert pumped water filter bag(s) and/or sump pit(s)*) on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
413. Provide a construction detail for the proposed (*insert pumped water filter bag(s) and/or sump pit(s)*) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #(*insert 3-16 or 3-17*) may be used for this purpose.

414. The construction detail for the proposed (*insert pumped water filter bag(s) and/or sump pit(s)*) does not meet the standards of Standard Construction Detail #(*insert 3-16 or 3-17*). §102.11(a)(1). Make all necessary corrections.
415. Add the notes in bold font below Standard Construction Detail #(*insert 3-16 on pages 54 and 55 in the E&SPC Manual or 3-17*) to the detail sheet. §102.11(a)(1).
416. Since the proposed (*insert pumped water filter bag(s) and/or sump pit(s)*) is located in an (*insert HQ or EV*) watershed, it should be modified to meet ABACT requirements. See page (*insert 53 or 55*) for guidance regarding modification for ABACT requirements. §102.11(a)(1).

### Concrete Washouts

417. A suitable washout facility should be provided for trucks delivering concrete to the site. See pages 57 through 60 of the E&SPC Manual for guidance on concrete washouts. §102.11(a)(1).
418. Show the location(s) of the proposed concrete washout facility on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
419. Provide a construction detail for the proposed compost sock concrete washout facility (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Figure 3.18 may be modified for this purpose.
420. Provide a construction detail for the proposed concrete washout facility (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). (*Use this comment for all other concrete washouts, i.e. not compost sock.*)

### On-Lot BMPs

421. Provide typical details for the proposed on-lot BMPs (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #s 10-1, 10-2, and 10-3 are recommended for this purpose.
422. The typical details for on-lot BMPs on (*specify drawing number*) do not meet the standards of Standard Construction Detail #s 10-1, 10-2, and 10-3. §102.11(a)(1). Revise as necessary.
423. On-lot BMPs may not be used in lieu of suitable perimeter BMPs (page 257 of the E&SPC Manual). §102.11(a)(1). Provide perimeter control measures suitable for this project.

### Temporary Stabilization

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

425. Specify the rate of application for the proposed temporary seed mixture (page 265 of the E&SPC Manual). §102.11(a)(1). Table 11.4 is recommended for this purpose.
426. Specify the (*indicate lime and/or fertilizer*) types to be applied for temporary seeding (page 265 of the E&SPC Manual). §102.11(a)(1). Table 11.2 is recommended.
427. Specify the (*indicate lime and/or fertilizer*) application rate for temporary seeding (page 265 of the E&SPC Manual). §102.11(a)(1). Table 11.2 is recommended.
428. All seeded areas (including temporary seeding) should be mulched (page 270 of the E&SPC Manual). §102.11(a)(1). Specify the mulch type and rate of application. See Table 11.2.

### Permanent Stabilization

429. Provide specifications for topsoil replacement (page 263 of the E&SPC Manual). §102.11(a)(1). Table 11.1 should be added to the detail sheet(s).
430. Provide a seed mixture for permanent stabilization (page 263 of the E&SPC Manual). §102.11(a)(1). Tables 11.3, 11.4, and 11.5 are recommended for selecting seed mixtures.
431. Specify the rate of application for the proposed permanent seed mixture (page 263 of the E&SPC Manual). §102.11(a)(1). Table 11.4 is recommended for this purpose.
432. Specify the (*indicate lime and/or fertilizer*) types to be applied for permanent seeding (page 263 of the E&SPC Manual). §102.11(a)(1). Table 11.2 is recommended.
433. Specify the (*indicate lime and/or fertilizer*) application rate for permanent seeding (page 263 of the E&SPC Manual). §102.11(a)(1). Table 11.2 is recommended.
434. All seeded areas should be mulched (page 270 of the E&SPC Manual). §102.11(a)(1). Specify the mulch type and rate of application. See Table 11.2.
435. Specify the type and application rate for the proposed composting (page 271 of the E&SPC Manual). §102.11(a)(1). Table 4.2 should be added to the detail sheet(s).
436. The plan should specify blanketing of all slopes 3H:1V or steeper as well as all disturbed areas within 50 feet of a surface water (100 feet for HQ or EV waters, page 273 of the E&SPC Manual). §102.11(a)(1).
437. Provide an installation detail for the proposed rolled erosion control blanketing (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Standard Construction Detail #11-1 is recommended for this purpose.
438. The erosion control blanket detail on sheet (*specify detail sheet number*) to not meet the standards of Standard Construction Detail #11-1. §102.11(a)(1). Make all necessary corrections.

439. Add the notes in bold font at the bottom of Standard Construction Detail #11-1 to the erosion control blanket detail on sheet (*specify detail sheet number*). §102.11(a)(1).
440. Show the areas to be stabilized using a hydraulically applied blanket on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
441. Show the areas to be stabilized using a soil binder on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1).
442. Show the areas to be sodded on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Figure 11.5 should be added to the plan drawing(s).
443. Show the areas to be stabilized using a cellular confinement system on the plan map(s) (Item 9, page 5 of the E&SPC Manual). §102.11(a)(1). Provide installation details (Figure 11.6 may be modified for this purpose.)
444. Upon completion or temporary cessation of the earth disturbance activity that will exceed 4 days, or any stage thereof, the project site shall be immediately stabilized with the appropriate temporary or permanent stabilization. Plan notes and the construction sequence should reflect this requirement. The construction sequence should incorporate the immediate stabilization requirement into any applicable areas. (Please note that hydroseed is not considered stabilization until it germinates). Hay or straw mulch must be applied at 3.0 tons per acre. §102.22(b).
445. Please add this note or update stabilization details accordingly: Areas which are to be top-soiled shall be scarified to a minimum depth of 3 to 5 inches (6 to 12 inches on compacted soils) prior to placement of topsoil. Areas to be vegetated shall have a minimum 4 inches of topsoil in place prior to seeding and mulching, i.e. yards. §102.22(a).

#### **Maintenance program §102.4 (b)(5)(x)**

446. Provide maintenance instructions for the proposed temporary and permanent BMPs (including disposal of materials removed from the BMPs or the project area) on the plan drawings (page 5 of the E&SPC Manual). §102.11(a)(1).
447. Provide a schedule for inspection of the various BMPs on a weekly basis and after each runoff event (page 5 of the E&SPC Manual). §102.11(a)(1).
448. The maintenance instructions should specify the maximum storage elevation/level for each of the proposed E&S BMPs (page 5 of the E&SPC Manual). §102.11(a)(1). Where Standard Construction Details are used, this information is contained in the bold font notes. This information may be referenced in the maintenance instructions.
449. Specify time frames for the required maintenance to be performed. This should vary depending upon the BMP and type of maintenance to be performed (page 5 of the E&SPC Manual). §102.11(a)(1).

450. Provide site stabilization repair parameters and directions for areas disturbed during maintenance activities (page 5 of the E&SPC Manual). §102.11(a)(1).
451. Provide disposal directions for sediment removed from the various BMPs (page 5 of the E&SPC Manual). §102.11(a)(1).
452. The maintenance instructions should specify that inspections be logged onto DEP form 3150-FM-BWEW0083 dated 2/2012 and kept on site at all times (page 5 of the E&SPC Manual). §102.11(a)(1).

#### **Recycling or disposal of materials §102.4 (b)(5)(xi)**

453. Identify the construction wastes related to the E&S BMPs that to be recycled or disposed (page 6 of the E&SPC Manual). §102.11(a)(1).
454. Provide instructions for proper recycling and/or disposal of the construction wastes associated with the E&S BMPs on the plan drawing(s) (page 6 of the E&SPC Manual). §102.11(a)(1).
455. Identify any known off-site waste or borrow areas and provide suitable erosion control BMPs for each one (page 6 of the E&SPC Manual). §102.11(a)(1).
456. Add a note to the plan drawings specifying that any off-site waste and borrow area must have an E&S plan reviewed and approved by (*specify agency*) prior to being activated (page 6 of the E&SPC Manual). §102.11(a)(1).

#### **Geologic formations or soil conditions that may have the potential to cause pollution §102.4 (b)(5)(xii)**

457. Address whether any geologic formations or soil conditions having potential to cause pollution to a surface water exists at the site (page 6 of the E&SPC Manual). §102.11(a)(1).
458. Provide instructions for proper handling of the (*insert geologic formation and/or soil condition*) identified as having potential to cause pollution to the surface waters (page 6 of the E&SPC Manual). §102.11(a)(1).
459. Provide typical details for proper handling of the (*insert geologic formation and/or soil condition*) identified as having potential to cause pollution to the surface waters on the detail sheet(s) (page 6 of the E&SPC Manual). §102.11(a)(1).
460. Show the location(s) of the (*insert geologic formation and/or soil condition*) identified as having potential to cause pollution to the surface waters on the plan map(s) (page 6 of the E&SPC Manual). §102.11(a)(1).

#### **Identification of potential thermal impacts §102.4 (b)(5)(xiii)**

461. Describe how potential thermal impacts upon receiving waters have been avoided and/or minimized by the plan design (page 6 of the E&SPC Manual). §102.11(a)(1).
462. Consideration should be given to (*specify BMP or procedure*) to (*insert avoid and/or minimize*) thermal impacts upon the receiving surface waters (page 6 of the E&SPC Manual). §102.11(a)(1).

#### **Consistency with the PCSM Plan §102.4 (b)(5)(xiv)**

463. Describe how the overall E&S plan supports the managing of stormwater during earth disturbance activities (page 6 of the E&SPC Manual). §102.11(a)(1).
464. The plan map(s) shows a proposed fill over the location of (*specify PCSM BMP*). Make all necessary revisions (page 6 of the E&SPC Manual). §102.11(a)(1).
465. The dimensions of (*specify BMP*) in the E&S plan are not consistent with the dimensions of this structure in the PCSM plan (page 6 of the E&SPC Manual). §102.11(a)(1). Make all necessary corrections.
466. The E&S plan map shows earthmoving (*specify location*) which is identified as an area not to be disturbed by the PCSM plan (page 6 of the E&SPC Manual). §102.11(a)(1). Correct as necessary.
467. Show the areas identified on Worksheet 2 in the NOI as Sensitive Natural Resources on the E&S Plan Map(s). §102.4 (b)(5)(xiv).
468. The plan map(s) show disturbed areas within the Sensitive Natural Resources areas identified as "Protected Area" on Worksheet 2 of the NOI. §102.4 (b)(5)(xiv). Make all necessary revisions.
469. Show the area of "Minimum Disturbance/Reduced Grading" claimed on Worksheet 3 of the NOI on the E&S Plan Map(s). §102.4 (b)(5)(xiv).
470. Identify the existing trees that are to be protected (Item 3.3 under Volume Credits on Worksheet 3 of the NOI) on the E&S Plan Map(s). §102.4(b)(5)(xiv).
471. Show the locations of the proposed BMPs identified on page 6 and on Worksheet 5 of the NOI on the E&S Plan Map(s). §102.4 (b)(5)(xiv).
472. The plan map(s) show (grading, fill placement, etc.) at the location(s) of proposed infiltration BMPs in the PCSM Plan. Explain how the required infiltration rates will be preserved/re-established. §102.4 (b)(5)(xiv).

#### **Riparian forest buffers §102.4 (b)(5)(xv)B**

473. Show the (*insert existing, proposed*) riparian forest buffer(s) on the plan map(s) (Item 15, page 6 of the E&SPC Manual). §102.11(a)(1).
474. Because (*insert stream name*) is classified as (*insert HQ or EV*) the limits of disturbance should not extend within 150 feet of the stream channel (Item

15, page 6 of the E&SPC Manual). §102.11(a)(1). Make all necessary corrections.

475. The limits of disturbance should not extend within 100 feet of the stream channel at the location of the proposed voluntary riparian forest buffer (Item 15, page 6 of the E&SPC Manual). §102.11(a)(1).