

July 6, 2023

*via email*

Encina Fort Union, LLC  
Attn: Sheida Sahandy  
1095 Evergreen Circle, Suite 510  
Woodlands, TX 77380

Re: Second Technical Deficiency Letter  
Point Township Circular Manufacturing Facility  
NPDES Permit Application No. PAC490109  
Point Township, Northumberland County

Dear Ms. Sahandy:

The Department of Environmental Protection (DEP) has reviewed the above referenced NOI and the March 9, 2023 Response letter, and has identified the technical deficiencies listed below. The *Pennsylvania Erosion and Sediment Pollution Control Program Manual* (E&S Manual) and the *Pennsylvania Stormwater Best Management Practices Manual* (BMP Manual) include information that may aid you in responding to some of the deficiencies listed below. The deficiencies are based on applicable laws and regulations, and the guidance sets forth DEP's established means of satisfying the applicable regulatory and statutory requirements.

#### **Technical Deficiencies - Department of Environmental Protection (DEP)**

---

1. Technical Deficiency 2 from the Northumberland County Conservation District (NCCD) Technical Deficiency Letter dated February 6, 2023 has not been adequately addressed.  
Please revise the E&S plan drawings to also include *Table 3: Limitations of Pennsylvania Soils Pertaining to Earthmoving Projects*, from within the ESCP narrative document.
2. Technical Deficiency 5 from the NCCD Technical Deficiency Letter dated February 6, 2023 has not been adequately addressed.  
The provided pre-construction drainage area map (ECMF-PRMT-CV-0037-1) does not reflect the drainage areas for the pre-construction condition within the project area. Please provide.
3. Technical Deficiency 6 and Comment 5 from the NCCD Technical Deficiency Letter dated February 6, 2023 has not been adequately addressed.  
The critical stages of construction must include all structural PCSM BMPs, however the identified note does not include the conversion of BMP-4 from a sediment basin to detention pond. Furthermore, the PCSM plan lacks required detention basin details (i.e. detailed cross section with elevations, construction notes and details, embankment core details with dimension/elevations, permanent riser/outlet details with orifice dimensions/elevations, liner details, etc.) and basin conversion details (i.e. excavation of sediment basin bottom overburden to achieve PCSM basin elevation, etc.). Notably, the status of a pond lining and infiltration design is conflicting, as the construction sequence and limited conversion notes identify use of a liner, however the supporting PCSM calculations claim infiltration credit. Lastly, the PCSM notes interchangeably reference the

**Technical Deficiencies - Department of Environmental Protection (DEP)**

---

basin as a detention basin and sediment basin, further drawing into question the form, function, and intended conversion of the basin.

4. Technical Deficiency 6 from the NCCD Technical Deficiency Letter dated February 6, 2023 has not been adequately addressed.

Similar to the previous comment, the PCSM plan lacks required details for subsurface storm chambers 1 and 2 details (i.e. detailed cross section with elevations, construction notes and details, outlet details with orifice dimensions/elevations, liner details, etc.).

5. Technical Deficiency 7 from the NCCD Technical Deficiency Letter dated February 6, 2023 has not been adequately addressed.

Specify within the referenced note each infiltration BMP for which compaction should be avoided.

6. Technical Deficiency 8 from the NCCD Technical Deficiency Letter dated February 6, 2023 has not been adequately addressed.

Construction sequence # 44.h. requires achieving permanent stabilization “before stormwater BMPs are installed”, however earlier in the construction sequence (i.e. #38-43) the temporary sediment basins are removed with the PCSM storm chambers installed prior to achieving permanent stabilization within the contributory drainage areas. Please resolve.

7. Technical Deficiencies 17 and 22 from the NCCD Technical Deficiency Letter dated February 6, 2023 have not been adequately addressed.

The revised E&S plan proposes Multi Fabric Fence as a perimeter BMP, however the proposed alignment are commonly across contour lines and are understood to generally be placed to serve as a boundary marking, in addition to act as a perimeter E&S BMP. The placement of perimeter E&S BMPs should be sited such that they effectively serve their function as an E&S BMP. Revise the plan drawings such that the perimeter BMPs will effectively function as perimeter BMPs, placed on contour with upturned ends to capture and treat stormwater; as currently proposed stormwater will be concentrated and conveyed, contributing to E&S concerns. If boundary marking is desired, the Department recommends utilizing construction fencing or similar in addition to the perimeter E&S BMPs; otherwise, a redundant series of perimeter E&S BMPs should be placed to effectively serve the function of perimeter E&S BMPs.

8. Technical Deficiency 20 from the NCCD Technical Deficiency Letter dated February 6, 2023 has not been adequately addressed.

The referenced Figure 4.2 and supporting calculations could not be identified within Appendix B. of the E&S plan. Please provide or clarify.

9. Technical Deficiency 33 from the NCCD Technical Deficiency Letter dated February 6, 2023 has not been adequately addressed.

The referenced table on ECMF-PRMT-CV-2001-3 indicates 1 lb/acre of fertilizer for both Permanent and Permanent – Steep Slope vegetative stabilization specifications; please correct and ensure the reported values are consistent throughout application documents, noting Table 11.2 on ECMF-PRMT-CV-1007-1, for example.

10. Technical Deficiencies 37 and 38 from the NCCD Technical Deficiency Letter dated February 6, 2023 have not been adequately addressed.

The receiving water (Susquehanna River) is an impaired water, therefore, to satisfy eligibility criteria 8 of the PAG-02, the applicant shall implement non-discharge alternative(s) or ABACT

**Technical Deficiencies - Department of Environmental Protection (DEP)**

---

BMPs shall be implemented. As identified within the E&S manual, additional design requirements for Sediment Basins that have not been satisfied include the use of a skimmer or a permanent pool with a 18" minimum depth, and a minimum flow length to width ratio of 4:1, among others. Refer to page 345 of the E&S manual for additional guidance and design criteria for ABACT Sediment Basins.

11. DEP PCSM Technical review found: The Department finds the infiltration design and modeling approach to be wholly inadequate resulting in negligible water quality treatment to the stormwater, with the following comments and observations: [25 Pa. Code §§ 102.8(g)(1) & §102.11(a)(2)]
  - a. The infiltration testing results identify multiple infiltration test locations that are excessively high (i.e. 1200 in./hr., “near instant water drop” ) within the footprint of proposed infiltration BMPs that render infiltration for water quality purposes to be undesirable without a suitable demonstration the proposed facilities will be constructed in a manner to limit infiltration, with underlying soils with acceptable Cation Exchange Capacity (CEC) values. Appendix C and section 2.2.5 of the BMP Manual provide additional guidance; Appendix C states “soils underlying infiltration devices should have infiltration rates between 0.1 and 10 inches per hour.” This desired underlying infiltration rates is the basis of infiltrating stormwater as an acceptable Water Quality demonstration, due to pollutant removal through chemical processes within the soil (i.e. adsorption through ion exchange and chemical precipitation).
  - b. To determine the design infiltration rate for BMP-1, infiltration testing was performed however an assumed infiltration rate of 15 in./hr. is selected with no justification. For example, test location 15 (observed 6 in./hr.), 16 (1260 in./hr.), 17 (1200 in./hr.), 18 (128.4 in./hr.) and 19 & 20 (“near instant water drop”). The Department notes the excessively high infiltration results.
  - c. To determine the design infiltration rate for BMP-2 and -3, there are multiple instances of infiltration results being selectively excluded with no justification; for example, BMP-2 does not consider test location 13 (2.0 in./hr.), BMP-3 does not consider test locations 4 (396 in./hr.), 5 (24.75 in./hr.), and 7 (106.14 in./hr.)
  - d. To determine the design infiltration rate for BMP-4, infiltration testing was not performed and an assumed infiltration rate of 15 in./hr. selected. Design infiltration rates must be supported by infiltration testing performed in accordance with Appendix C of the BMP Manual. As previously identified, application documents also indicate BMP-4 is to be lined.
  - e. As proposed, the PCSM BMPs may provide limited Total Suspended Solids (TSS) treatment, however it is not evident that any Total Phosphorus (TP) and Total Nitrogen (TN) treatment is achieved.
12. DEP PCSM Technical review found: The PCSM plan drawings for the subsurface storm chambers do not include site specific details (i.e. number of chamber sections or required square foot coverage, chamber section configurations elevations, outlet details, access for cleaning and maintenance of SEDIMENTRAP or inflow locations, etc.). [25 Pa. Code § 102.8(f)(6)]
13. DEP PCSM Technical review found: Plan drawing ECMF-PRMT-CV-2001-3 provides permanent seeding specification for “before June 15”. Please revise the permanent and temporary vegetative stabilization details to 1) clarify the full construction season (growing and non-growing seasons), 2) identify specific seeding, fertilizer, and mulching specifications for the growing and non-growing seasons. Additionally, permanent seeding placed outside the growing season shall include

**Technical Deficiencies - Department of Environmental Protection (DEP)**

---

- guidance to ensure the establishment of robust perennial vegetative cover the following growing season – rather than simply annual nurse /cover crop - throughout the stabilized project area. [25 Pa. Code §§102.4(b)(5)(vii), 102.8(f)(6) & 102.22]
14. DEP PCSM Spreadsheet review found: The Post Construction Conditions: Land Cover table accounts for 23.09 acres of impervious, whereas application documents otherwise report 23.39 acres of proposed impervious. Please correct or clarify. [25 Pa. Code § 102.8(f)(8)]
  15. DEP PCSM Spreadsheet review found: The Structural BMP Volume Credits table *Storage Volume (CF)* values should be calculated based on the lowest outlet elevation as the volume of water must be stored within the BMP for infiltration, as indicated in Note 35 of the DEP PCSM Spreadsheet Instructions document. [25 Pa. Code § 102.8(f)(8)]
  16. PCSM Narrative, Section 5 Maintenance and Inspections review found: the maintenance and inspection schedule is limited to during the construction phase, rather than identifying long-term maintenance and inspection requirements to ensure the long-term operation and function of the PCSM BMPs. Revise the maintenance and inspection schedule to address all requirements identified in 25 Pa. Code § 102.8(m)(1) and (2) and include the PCSM BMP long-term operation and maintenance information within the plan drawings to ensure their inclusion within the recorded plan drawings. [25 Pa. Code § 102.8(m)]
  17. PCSM Plan drawing review found: Please clarify the Chapter 105 authorizations for the impacts within the FEMA Floodway. The Department notes the use of R-4 for scour protection at the basin outlets within the top of bank of the Susquehanna River; noting that the outlet apron will be subjected to flow velocities, potential ice jams etc. within the watercourse, please demonstrate R-4 is sufficient, or otherwise provide a more suitable apron material. [25 Pa. Code §§ 102.4.(b)(4)(ii) & 102.8.(b)(5)]
  18. PCSM Plan drawing review found: The Department notes the length and slope of the outlet pipes for the basins (approx. 500', 4.21% slope for BMP-4) with no riser box or similar energy dissipater. In conjunction with the immediately prior comment, the Department is concerned the outlets as configured will lead to streambank destabilization and erosion. [25 Pa. Code §§ 102.4.(b)(4)(ii) & 102.8.(b)(5)]
  19. In addition to the E&S and PCSM plans and supporting appendices already provided to DEP, please provide the NOI and all applicable NOI requirements identified on the PAG-02 Checklist (3800-PM-BCW0405c) to DEP for review. The Department requests these items be submitted promptly, to facilitate a timely review and correspondence should additional deficiencies be identified therein. [25 Pa. Code § 102.6(a)(1)]

You must submit a response fully addressing each of the technical deficiencies set forth above. Please note that this information must be received within 60 calendar days from the date of this letter, on or before September 4, 2023 or DEP may deny the application.

Please submit 2 paper copies of the revised information to the District at 441 Plum Creek Road, Sunbury, PA 17801, and 1 copy of the revised information to DEP at 208 West Third Street Suite 101, Williamsport, PA 17701. Additionally, digital access of the full application submission with all revisions incorporated within should be provided to both the District and DEP.

If you believe that any of the stated deficiencies are not significant, instead of submitting a response to

Encina Fort Union  
Attn: Sheida Sahandy

- Page 5 -

 COPY

July 6, 2023

that deficiency, you have the option of requesting that DEP make a permit decision based on the information you have already provided regarding the subject matter of that deficiency. If you choose this option with regard to any deficiency, you should explain and justify how your current submission satisfies that deficiency.

If you have questions about your application, please contact Andrew J. Ross by e-mail at [andross@pa.gov](mailto:andross@pa.gov) or by telephone at 570.321.6575 and refer to Application No. PAC490109, to discuss your concerns or to schedule a meeting. You must attempt to schedule any meeting within the 60 calendar days allotted for your reply.

Sincerely,



Steven S. Putt, CPESC  
Environmental Program Manager  
Waterways and Wetlands Program

cc: Clough USA, Inc./ Augusto Ramos-Orozco, PE  
Rettew/ Victor Grande, PE  
Snyder County Conservation District / L. Hile & N. Brophy  
Point Township, Northumberland County

bcc: File  
SSP/AJR

PT00050723