



pennsylvania

DEPARTMENT OF ENVIRONMENTAL
PROTECTION

September 30, 2021

Via Email: lpektor@ashleydevelopment.com

New Demi Road, LLC
c/o Louis P. Pektor, III
559 Main Street, Suite 300
Bethlehem, PA 18018-5862

Re: Technical Deficiency Letter
303 Demi Road Planned Industrial Park (major amendment)
NPDES Permit Application No. PAD480132 A-1
City #: 31-21-1-18
Upper Mt. Bethel Township & Portland Borough, Northampton County

Dear Applicant:

The Northampton County Conservation District (District) has reviewed the above referenced application 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.

The technical deficiencies void the permit decision guarantee and any agreements that have been made regarding the timeline for the permit application review. DEP will continue to follow the permit review process procedures in the review and processing of this permit application.

Technical Deficiencies

1. ***§102.4(b)(5)(i) The existing topographic features of the project site and the immediate surrounding area.***
 - a. ESC-02 states 'See Sheet ESC-01 for Continuation'. ESC-01 is the Overall NPDES Permit Boundary Plan. Please clarify.
 - b. In the location of MH-38 on ESC-01 and ESC-02, the Water Quality (WQ) Insert note is covering the inlet identification number.
 - c. On ESC-01 and ESC-02, in the location of the emergency spillway, the outlet control structure (OCS) number cannot be read.
 - d. On the south side of Underground Basin 1A on ESC-18 and ESC -21, there is overlapping text; please revise.
 - e. ESC-18 and ESC-21, near compost filter sock CFS #17, there is overlapping text at the inlet.
 - f. ESC-10 and ESC-11, in Sediment Basin#1, there is overlapping text near the inlet.
 - g. The gray triangles have not been identified in the legend; please revise.

2. ***§102.4(b)(5)(iii) The characteristics of the earth disturbance activity, including the past, present, and proposed land uses and the proposed alteration to the project site.***
 - a. Past land uses are the actual land use(s) of the project site for the past 50 years or longer if known, not just the zoning of the land. Present land uses are the dominant land uses of the project site for the 5 years preceding the planned project, not just the zoning of the land. Please revise as needed.

3. ***§102.4(b)(5)(vii) A sequence of BMP installation and removal in relation to the scheduling of earth disturbance activities, prior to, during, and after earth disturbance activities that ensure the proper functioning of all BMPs.***
 - a. Step 6 references EW-51 which could not be located on plan drawings; please clarify/revise as needed.
 - b. Step 21 references Stage 2 #13, which appears not to be associated with sewage; please revise.
 - c. E&S BMPs associated with the installation of On-lot Sewage Disposal Area do not appear to be referenced in the construction sequence; please revise.
 - d. Step 27 references Stage 2 #17, which appears not to be associated with temporary plates; please revise.

4. ***§102.4(b)(5)(viii) Supporting calculations and measurements.***
 - a. Modified Worksheet #1: It appears the location referenced for CFS #1 is inconsistent with plan drawing; please revise.
 - b. Worksheet #11:
 - i. Please provide manufacturer's specification for proposed liners to support calculations; review of swales could not be completed.
 - ii. Please clarify Diversion Swale bottom width of zero as it appears on plan drawing to be approximately 10'.
 - iii. Please clarify Channel Top Width (FT) @ D on the Diversion Socks, as values on worksheet appear inconsistent with plan drawings.
 - c. Worksheet #13 (Sediment Basin 1):
 - i. When Outlet to Surface Water is NO, and Drainage Area is More Than 10% Larger Than Pre-Construction, please provide supporting calculations to show accelerated erosion will not result from the proposed discharge, i.e., provide level spreader details in E&S narrative/ plan drawings that meet the standards provided in E&SPC manual Appendix G or approved alternative.
 - ii. Please clarify Elevation 3, as it appears the temporary riser crest would raise the dewatering zone to an elevation of 448.65, and extend the principle crest elevation higher than the emergency spillway elevation.
 - iii. Please clarify Average Bottom Width and Average Bottom Length as the values provided far exceed the Bottom Elevation Sq. Ft. provided on Worksheet #14; revise as needed.
 - iv. Please clarify Average Basin Width at Elevation 3 as the value appears inconsistent with calculations, i.e., 15,580 divided by max basin length at Elevation 3.

- v. Please clarify Flow Length at Elevation 3 as it appears outfall from T-3 is measured at approximately 170 feet, and discharge from Diversion Soxx #1 is approximately 10 feet.
 - vi. Emergency Spillway Side Slopes are indicated as 3:1 on the worksheet, but as 2:1 on Detail #7-12 (Z5); please revise/ clarify as needed.
 - vii. Emergency Spillway Depth appears inconsistent with Detail #7-12; please revise.
- d. As identified on the Skimmer Sizing Calculations Worksheet for Sediment Basin 1, the skimmer size is not adequate; revise as needed.
- e. Worksheet #13 (Sediment Basin 1 & Sediment Basin 2):
- i. Indicates Forebay are being used but do not appear to be represented in Sediment Basin Detail(s) or plan drawing(s); please clarify/ revise.
 - ii. Embankment Soil Types: Soils acceptable for embankment construction should be limited to GC, GM, SC, SM, CL or ML as described in ASTM D-2487 (Unified Soils Classification).
- f. Worksheet #13 (Sediment Basin 2):
- i. Please clarify Elevation 3, as it appears the temporary riser crest would raise the dewatering zone to an elevation of 452.81; revise as needed.
 - ii. Please clarify Average Basin Width at Elevation 3 as the value appears inconsistent with calculations, i.e., 22,427 divided by max basin length at Elevation 3.
 - iii. Please clarify Flow Length at Elevation 3 as it appears outfall from T-9 is measured at approximately 260 feet, and discharge from EW-48 is approximately 300 feet.
- g. Sediment Basin 2 Emergency Spillway appears inconsistent with requirements in E&SPC Manual Chapter 7, i.e., every sediment basin should be provided with an emergency spillway with a minimum bottom width of 8'. Emergency spillways not designed to convey part of the required discharge capacity should have a minimum depth of 6". All others should have sufficient depth to convey the design discharge while providing the required freeboard above the elevation at which the design discharge is provided. Please revise as needed.
- h. It does not appear the Required Surface Area is met for Sediment Trap #1 and #2. Where this is not possible, consideration should be given to the use of a sediment forebay or a turbidity curtain to increase trap efficiency.
- i. It does not appear that Sediment Trap #1 and #2 meet the minimum required flow length to width ratio (2:1), i.e., 1.27:1 and 0.98:1 respectively. Revise as necessary. An acceptable alternative is the use of a sediment forebay or turbidity curtain.
- j. The riprap apron outlet protection worksheet provided is not a standard worksheet and does not contain all the necessary information. Worksheet #20 from the E&SPC manual is recommended.
5. ***§102.4(b)(5)(ix) Plan drawings.***
- a. For clarity, previous phases should be shown as existing in subsequent phases.
 - b. For clarity, later phases should not be depicted in the earlier phases.
 - c. The wash rack should discharge to a sediment removal facility, such as a vegetated strip or into a channel leading to a sediment removal device (e.g. a sediment trap or

- basin). Please clarify which method will be employed as it was not noted on the plan sheet. An approved alternative RCE (has an additional 50' [non-special protection] or 100' [special protection] of rolled 2RC) may be provided to eliminate the wash rack and still meet ABACT requirements.
- d. Standard Construction Detail #3-1 Rock Construction Entrance is not applicable to the project; please strike through or remove it from ESC-25 E&S Detail sheet.
 - e. Washout facilities should not be placed within 50 feet of storm drains, open ditches or surface waters; please revise as needed.
 - f. Proposed grading and features appear to conflict with LOD and CFS placement along the west side of access road, e.g., CFS 4, 5, 12-17, etc.; please revise with more clearance for CFS installation and maintenance to ensure no disturbance will occur in the Bog Turtle Setback area.
 - g. Outlet Protection should be provided for the discharge of all swales, i.e., Diversion Soxx #1 and #2; please revise.
 - h. Riprap aprons should be installed on level grade; please revise the outlet protection from EW-41 as necessary.
 - i. Please provide soil erosion control matting/channel lining on plan drawings for proposed Diversion Sock 1 through 4, and Diversion Swale, that are at least as wide as the Channel Top Width @ Flow Depth provided on Worksheet #11.
 - j. Sediment Basin 1 baffles should be shown extending to the elevation of the top of the baffle, i.e., elevation 451 (bottom elevation 444 plus 7.0 feet max height); please revise.
 - k. Sediment Basin 2 has two outlet structures but supporting details indicate only one skimmer; please show skimmer and stone landing berm on plan drawings where applicable, i.e., Sediment Basin 1 and Sediment Basin 2, etc.
 - l. There does not appear to be E&S BMPs downslope of all disturbed areas, i.e., Sewage Disposal Area, etc.; please revise as needed.
 - m. Clarification is needed for the fertilizer rates for both the temporary and permanent application. This should be specific for each stabilization type. Worksheet #21 is recommended for this purpose.
 - n. Mulch application rate for either the temporary and permanent seeding could not be located; please include in Soil Seeding, Fertilizing and Mulching Specifications on sheet ESC-24 E&S Notes.
 - o. Please provide supporting measurements to Level Spreader detail and/or plan drawing, i.e., length of Level Spreader #1, #2, and #3, etc.
 - p. Please provide Operation & Maintenance instructions for Level Spreader on E&S Plan Details (Re.: E&SCP manual pages 438-439).
6. ***§102.6(a)(1) Submit to the Department or a conservation district a complete application or NOI, an E&S Plan meeting the requirements of § 102.4 (relating to erosion and sediment control requirements), a PCSM Plan meeting the requirements of § 102.8 (relating to PCSM requirements), and other information the Department may require.***
- a. In order to best consolidate the NPDES Permit Application materials currently on hand, please provide NCCD with a complete resubmission of all required application items.

- b. NPDES application section B.8 – The negative sign is missing from the longitude information (“-75”). Please revise as necessary.
 - c. NPDES application section D.5 – This section indicates that a non-surface water discharge is proposed. As such, the following comments should be addressed:
 - i. NPDES application section C.5 should be revised to identify the non-surface waters that will receive discharge as a result of this project, consistent with section D.5 (i.e. Demi Road storm sewer, etc.).
 - ii. The discussion provided in the NOI appears incomplete and was not provided in the supporting narratives. At a minimum, the analysis should include supporting documentation related to the proposed discharge (i.e. discharge flow path description, downstream property owners, flow path mapping, ultimate discharge point(s) to surface water, etc.). Please revise as necessary. For additional guidance, refer to PADEP’s “Chapter 102 Off-Site Discharges of Stormwater to Non-Surface Waters” Frequently Asked Questions last revised 2/17/2021.
 - d. NPDES application section D.7 – The permit application states that earth disturbance is proposed within 150 feet of an HQ/EV river, stream, creek, lake, pond or reservoir. This earth disturbance activity could not be clearly located on the PCSM plan drawings (i.e. UNT to Delaware River west of the proposed warehouse, east of the existing pond at 201 Demi Road, etc.). Please review and clarify/revise as necessary. These earth disturbance activities may qualify as allowable activities per §102.14(f)(2) (i.e. construction or placements of roads, storm drainage, utilities, etc.). Please revise NOI Section D.7 to identify that allowable earth disturbance is proposed within the buffer limits and revise the PCSM plans to identify the buffer limits. §102.14(a), §102.14(f)(2)
 - e. NPDES application section H.3 – The Act 537 Plan status is stated as “pending”. Please note Act 537 approval is required prior to initiation of earth disturbance.
 - f. Municipal and County Notifications – Some of the data in the Act 14 notifications is inconsistent with NPDES application section C.5 (i.e. receiving surface waters, acreages, etc.). Please resend the corrected notifications and provide copies, receipts and/or responses with the resubmission.
 - g. Pennsylvania Natural Diversity Inventory (PNDI) – PNDI search receipt 733305 (86.08 acres) was submitted with the application without the associated clearance letters. The associated correspondence and clearance letters should address the proposed storm sewer and discharge point southwest of the existing Demi Road cul de sac. Please note that all PNDI clearance letters must be submitted with the NPDES application prior to permit issuance.
7. ***§102.8(c) Consistency with E&S Plan. The PCSM Plan shall be planned, designed and implemented to be consistent with the E&S Plan under § 102.4(b) (relating to erosion and sediment control requirements).***
- a. The PCSM plan should be planned, designed and implemented to be consistent with the E&S Plan. If any design changes made as a result of the PCSM and E&S deficiencies should impact either plan, please make the necessary revisions and list them clearly in the response letter. §102.8(c)

- b. There are areas of concentrated flows proposed in multiple locations without adequate conveyance or outlet protection (i.e. cut slope in northeast corner of truck dock/I-1, cut & fill interface with existing grades east of truck court to I-51, etc.). Please revise.
 - c. The E&S and PCSM plan drawings/narratives state that the soils are underlain by karst geology which is in conflict with the naturally occurring geologic formations note. Please review and revise all permit application materials for consistency and accuracy (i.e. NPDES application section D.6, plan and narrative notes, sinkhole repair detail, etc.). §102.4(b)(5)(xii), §102.8(f)(12)
8. **§102.8(f)(8) Supporting calculations.**
- a. This project proposes discharge to EV wetlands located in the floodplain of the UNT to Delaware River. If EV wetlands are identified, please provide a level of demonstration that there will be no degradation or adverse impacts to the EV wetland(s) which includes but is not limited to physical, chemical, thermal, biological, and volumetric impacts. This analysis should include assessing both the surface water and ground water hydrology and impact of the stormwater to the functionality and value of the wetland(s). The analysis may include but is not limited to calculations, reports, studies, assessments and any other necessary documentation. In particular, the site currently discharges to the EV wetlands in a sheet flow condition which will then be concentrated in pipe conduit discharges. Please review and assess the impacts of these conduit discharges and consider alternatives (i.e. level spreaders, etc.).
 - b. Worksheet 5 is typically reserved for structural BMP credits. As such, revegetate and reforest disturbed areas using native species (BMP 5.6.3) should be relocated to Worksheet 3. Additional revisions may be necessary. §102.8(g)(2)
 - c. The landscape restoration (BMP 6.7.2) BMP appear to be “double dipping” volume credit by reducing curve numbers on Worksheet 4 and providing structural volume control credit on Worksheet 5. The design calculations may provide either curve number credit or volume control credit but not both. Please review and revise as necessary. Additional revisions to the NOI and worksheets may be necessary.
 - d. The Basin 1A layout (plan view) is inconsistent between the drainage area plans and PCSM Plans/Narrative. Please review and clarify/revise as necessary. §102.8(g)(3)
 - e. Time of concentration (T_c) is typically based on flow path from the hydraulically most distant point of the watershed to a point of interest with the watershed. As such, the flow path for the “Pre-1” & “Post 1 Bypass” drainage areas appears to utilize additional flow length outside of watershed. Please review and clarify/revise as necessary.
 - f. Emergency spillways should be designed to safely convey the 100-year inflow hydrograph in case the primary structure malfunctions. Emergency spillway calculations could not be located in the PCSM narrative – please provide. Typical design practice is for an earthen spillway built into the basin berm to avoid malfunctions – please provide additional justification for the current proposed

configuration. If the emergency spillway will rely on an inlet box with downstream storm sewer system, storm sewer capacity calculations should also be provided.

- g. The Basin 1B emergency spillway (elev. 449.29) is proposed at a lower elevation than the top of the outlet control structure (elev. 450.50). Emergency spillways are typically set above all other outlet structures. Please review and clarify/revise.

9. **§102.8(f)(9) Plan drawings.**

- a. Temporary E&S features should not be shown in PCSM plan view (i.e. concrete washout near cul de sac on PCSM-11, etc.). Please revise as necessary. §102.8(d)
- b. Per the NPDES application instructions, the plans and specifications for engineered structural BMPs must be sealed by a qualified professional engineer. As such, all PCSM plan sheets and narrative should be signed/sealed by the responsible professional engineer. §102.8(e)
- c. Please revise the PCSM plan legend to identify the roof drain leaders. A “roof drain leader (typ.)” label in plan view is also acceptable. §102.8(f)(3)
- d. Please revise the PCSM plan legend to identify all major plan features including, but not limited to, wetland hatches, surface water boundaries, fences, retaining walls, access drive hatches (and associated cover type), etc.
- e. Based on the proposed grading, there appear to be multiple retaining walls on the site. Please revise the PCSM plan to label these feature(s) and provide some basic spot elevations for reference.
- f. The north arrow appears to be missing from some of the PCSM plan sheets (i.e. PCSM-10, etc.). Please revise.
- g. Please revise storm sewer structure labels for legibility, particularly those associated with a PCSM BMP (i.e. I-16, I-37, I-39, manholes on west side of building, etc.)
- h. Storm sewer information (i.e. inverts, lid elevations, pipe size/slope/length, etc.) should be provided with the NPDES permit application materials as stormwater conveyance system information is a requirement for NPDES Notice of Termination (NOT) as-built plans.
- i. There is earth disturbance proposed the 201 Demi Road parcel, adjacent to the development site for a sanitary sewer extension and an access road. Please clarify the timing of this construction (future sewer extension?) and fate of the proposed features (temporary access road to be removed?). Clarification should also be provided how these improvements have been accounted for in the PCSM design.
- j. The wetlands & watercourse limits are depicted on the PCSM plans however, a copy of the associated delineation report(s) were not found with the submission. One copy of the delineation report(s) and plan(s) is requested. To document the source of the limits, please provide E&S and PCSM plan notes regarding the delineation performed (i.e. methods, report date(s), consultants, etc.). §102.8(f)(5)
- k. Please revise the level spreader details to provide a plan view including, but not limited to overall level spreader length. It appears that level spreader 1 total length may exceed the E&S BMP Manual Appendix G recommendations (200 feet maximum). §102.8(f)(6)

- l. Outlet protection is a permanent feature of the PCSM Plan and should be addressed as such. Please revise the PCSM plan sheets and narrative as necessary to support these features (i.e. construction details, plan labels, calculations, etc.).
- m. Please revise the PCSM plan drawings to provide a cross section of detention basin 1B with pertinent construction information (i.e. liner type, embankment core, topsoil depth, seeding specifications, etc.).
- n. Please review and confirm the 12” minimum cover currently specified for the 60” detention basin pipes. Adequate cover should also be verified for the during-construction phase.
- o. The outlet control structure 2 detail specifies a 4’x4’ box but depicts a Type M grate (2’x4’ typical) without a modified lid similar to control structures 1 & 4. Please review and revise for consistency.
- p. The construction details for outlet control structures 1 & 4 specify an “8’ weir w/ 3” diameter orifice”. Please clarify this configuration and/or revise as necessary.
- q. Please revise the outlet control structure details to specify water-tight seals for all pipe and structure joints.
- r. All PCSM BMPs should be identified in plan view & NOI Section D.4 and adequate construction details & inspection/maintenance information should be provided. Please review and revise as necessary for all BMPs (i.e. landscape restoration not located in plan view, seeding specifications, etc.).
- s. Appendix G of the E&S Manual recommends that areas downslope of level spreaders be left undisturbed. Level spreader 1 is proposed upslope of a proposed storm sewer tributary to level spreader 2. Please revise the storm sewer configuration to avoid discharging across this disturbed area.
- t. An overall BMP construction sequence was not found on the PCSM plan drawings. Please revise. §102.8(f)(7)
- u. The operation and maintenance information for the Revegetate and Reforest Disturbed Areas, Part 1 PCSM BMP could not be located on the PCSM plan drawings. Please revise. §102.8(f)(10)
- v. The operation and maintenance information for the water quality inserts should be revised to include the manufacturer’s guidelines currently referenced and provide a schedule for replacement of the product-specific consumables.
- w. Please consider revising sheet PCSM-15 to provide BMP operation and maintenance information specifically for the subsurface detention basins. Currently, the O&M information is specific to at-grade vegetated basins only.
- x. A voluntary riparian forest buffer is proposed with this major amendment to address both the volume control and water quality requirements. As a non-discharge alternative, a voluntary riparian forest buffer also satisfies all thermal impacts when implemented. §102.14(b)(3) requires that riparian forest buffers be managed in accordance with riparian forest buffer management plan (§102.14(b)(4)) and permanently protect in accordance with §102.14(g). This information was not found with the submitted application items. The following comments should be addressed:
 - i. In accordance with “Riparian Buffer or Riparian Forest Buffer Equivalency Demonstration” (PADEP document number 310-2135-003, dated 3/21/2015), applicants should prepare a riparian forest buffer management

- plan containing a planting plan (Appendix A), a maintenance plan (Appendix B), and a monitoring plan (Appendix C) which should all be included as part of the post construction stormwater management plan. Please provide.
- ii. The PCSM plan drawings and associated riparian buffer management plan should be revised to provide the 50' Zone 1 and 100' Zone 2 boundaries to demonstrate regulatory compliance §102.14(b)(2)
 - iii. While the current proposal is for protection of an existing forested riparian buffer, the riparian buffer management plan should provide guidance regarding the maintenance and/or replacement of the existing plantings. Reference could be made to "Riparian Forest Buffer Guidance" (PADEP document number 394-5600-001, dated 11/27/2010).
10. ***§102.8(g)(1) Predevelopment site characterization and assessment of soil and geology including appropriate infiltration and geotechnical studies that identify location and depths of test sites and methods used.***
- a. Please provide a site plan with all proposed features and the completed test pit/boring locations. As such, a complete review of the groundwater conditions within the detention basins could not be completed. Sufficient investigation should be performed to ensure that existing groundwater conditions will not impact these basins during the E&S or PCSM phases. §102.8(f)(2), §102.8(g)(1)
11. ***§102.8(k) Licensed professional oversight of critical stages. A licensed professional or a designee shall be present onsite and be responsible during critical stages of implementation of the approved PCSM Plan. The critical stages may include the installation of underground treatment or storage BMPs, structurally engineered BMPs, or other BMPs as deemed appropriate by the Department or the conservation district.***
- a. The critical stages of PCSM plan implementation should, at a minimum, include all structural PCSM BMPs (i.e. implementation/maintenance of voluntary riparian forest buffer, etc.). Please revise as necessary.
 - b. The critical stages could not be located on the PCSM plan drawings. Please revise as necessary. The critical stages should be consistent with NPDES application section D.9.
12. ***Comments were received by PADEP during the 30-day public comment period. Copies of those comments are attached to this letter and are to be addressed by the applicant with the resubmission.***
13. ***Resubmission fee should be submitted to the District with the revised plans and narratives for review (per Section VIII, Northampton County Conservation District Erosion and Sediment Pollution Control Plan Review Fee Schedule.). §102.6(b)(3)***

You must submit a response fully addressing each of the technical deficiencies set forth above. Please note that this information must be received within 30 calendar days from the date of this letter, on or before November 1, 2021 or DEP may deny the application.

Based on guidance received from PADEP, to reduce the spread of the COVID-19 virus, NCCD will be accepting electronic submissions. When you are ready to submit your documents, please follow the instructions on NCCD's website.

If you believe that any of the stated deficiencies are not significant, instead of submitting a response to that deficiency, you have the option of requesting that DEP 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 any questions regarding the identified deficiencies, please contact Jonathan Fox for E&S inquiries at 610.829.6276 or Daniel Ahn for PCSM inquiries at 610.829.6277, and refer to Permit Number PAD480132 A-1, to discuss your concerns or to schedule a meeting. You must attempt to schedule any meeting within the 30 calendar days allotted for your reply.

Sincerely,

Robert Jevin

Robert J. Jevin III, P.E.
Environmental Group Manager
Waterways and Wetlands Program

cc: Vertek Construction Management c/o Michael Sodl, PE (msodl@vertekcm.net)
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