



Sent Via E-mail

June 30, 2023

CRGXX22001

Ms. Holly Kaplan, Assistant District Manager
Lehigh County Conservation District (LCCD)
4184 Dorney Park Road, Suite 105
Allentown, PA 18104

**RE: Response to Technical Deficiency Letter
NPDES Permit Application No. PAD390265
2951 Betz Court Site
CRG Services Management, LLC
Lowhill Township, Lehigh County, PA**

Dear Holly:

In response to the Pennsylvania Department of Environmental Protection (PADEP) Technical Deficiency Letter, dated May 31, 2023, and with reference to the above, we offer the following for consideration:

TECHNICAL DEFICIENCIES:

1. §102.4(b)(5)(i) The existing topographic features of the project site and the immediate surrounding area.
 - a. Provide a full legend with all line types, hatchings, and symbols included. For example – inlet filter protection, swale matting etc. has not been included.

A legend has been added to the plan detailing the above items.

- b. Label additional existing grades on the ES plans.

Additional existing contour labels have been added to the E&S Plan.

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. Clarify proposed grading on the ES plans; see proposed contour 648 on the ES plans.

The proposed grading has been modified to clarify the intent of the subject area.

- b. Clarify the labelling of inlets on the ES plan drawings; inlet labels are not visible due to overlapping notes in several locations.

Labels has been moved to avoid overlapping.

- c. Label all proposed stormwater features on all applicable ES plan sheets, for example, outlet control structures.

All stormwater features have been labeled on E&S Plan set.

- d. Provide proposed treeline on the ES plan drawings.

The proposed tree line is now shown on the E&S Plan.

- e. Label all riparian buffers on the ES plan drawings.

Please see additional Riparian Buffer Plan located within the revised E&S Plan set.

3. §102.4(b)(5)(iv) The volume and rate of runoff from the project site and its upstream watershed area.
 - a. The drainage area upslope of Diversion Sock #1 is not adequately directed towards Sediment Basin 1, as identified on the ES Drainage Area Exhibit, plan drawings 4.0. Please address by altering the diversion sock location on the ES plans or the drainage area map for consistency.

Diversion Sock #1 has been redirected to end immediately upslope of Inlet 1-1. Drainage area mapping and calculations have been updated accordingly.

- b. If intending to use inlet 1-1 as a conveyance for upslope disturbed areas to Sediment Trap 1, please note that the elevation of the inlet will not allow stormwater to enter the inlet until later stages of grading. Please address in the ES design how runoff will be conveyed into the stormwater basin during mass grading.

Reference is made to the additional notes detailing the installation of Inlet 1-1 which will be installed in multiple vertical sections.

- c. Provide and label the drainage area to proposed swales on the drainage area map.

Drainage areas and labels for the proposed swales have been added on the drainage area map.

4. §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. Provide consistency with ES plan drawings, ES sequence of construction item #7 directs socks 1-15 be installed. Provide consistency with ES plan for sock numbers.

Sequence of Construction Item #7 has been revised for consistency with the E&S Plan.

- b. The installation of OS-1D has not been included in the ES sequence of construction.

Sequence of Construction Item #9 has been revised to include OS-1D.

- c. Inlet 3-4 is not included in the ES sequence of construction – please include and update the ES Drainage Area Exhibit if necessary.

Sequence of Construction Item #9 has been revised to include Inlet 3-4. In addition, the Drainage Area Exhibit has been revised to include the Inlet 3-4 drainage area.

- d. Clarify how structure 1-1 will be installed in the ES sequence of construction, item #9d; existing grades will not allow for the structure to be installed and functional prior to mass earthmoving.

Sequence of Construction Item #13 has been revised to include this information.

- e. The ES sequence of construction should include the removal of the existing stormwater basin outlet control structure and associated piping.

Sequence of Construction Item #8 has been revised to include removal of existing stormwater basin structures and pipes.

- f. It is recommended to provide the location of access pathways on the ES plan drawings for use prior to the completion of sediment basins to provide a controlled access path to sediment basins and fill/topsoil stockpile locations.

Access pathways & notes have been added on Sheets ES 11.0 & ES 12.0.

- g. ES sequence of construction; ES BMPs should remain in place for conversion of the basins.

Sequence of Construction Item #22 has been revised to include the instructions on the basin conversions.

- h. Es sequence of construction; include the installation of proposed swales.

Sequence of Construction Item #18.C has been revised to include installation of the proposed channels.

- 5. §102.4(b)(5)(viii) Supporting calculations and measurements.
 - a. Filtrexx Diversion Socks – the effective height of compost socks should be used for channel calculations to account for settling. Please refer to the Filtrexx manual.

The Filtrexx manual states that the effective height of the compost Filtrexx Diversion Socks is available in 8", 12" and 24" diameters. The manual suggests that a minimum of 4" of freeboard be provided. Based upon the proposed flows, a 24" diameter sock is being proposed. The calculations provided on Worksheet #11 reflect a calculated depth within the temporary diversion channels of 0.94' for FS#1 and 0.99' for FS#2. Respectfully, that provides at least 1' of freeboard in the temporary channels.

- b. Provide calculations demonstrating that Diversion Sock #2 will not cause erosive conditions at the discharge point into Sediment Basin 2.

This sock has been adjusted to provide positive drainage toward Inlet 2-1 and create a sump area at the inlet so that no flow from the filter sock bypasses the inlet and drains uncontrolled toward Basin #2.

- c. Compost filter sock slope length calculations do not appear consistent with plan drawings. Please provide a separate drainage map with slopes used for compost sock calculations identified.

A separate drainage map is now provided for compost filter sock.

- d. Sediment Basin 1; it has not been demonstrated that the peak flow from a 10-year/24- hour storm event can be passed through the principal spillway, as per the PA DEP ES Manual guidance for designing stormwater basins.

The principal discharge pipe was modified to represent the proposed conditions. Previously, the downstream invert of the primary discharge pipe was 630.00 and the proposed invert is now 618.56.

- e. Sediment Basin 2; it has not been demonstrated that the peak flow from a 10-year/24- hour storm event can be passed through the principal spillway, as per the PA DEP ES Manual guidance for designing stormwater basins.

A Type 5 Box is now being used for the outlet structure to allow more flow through the top of it.

- f. Provide verification that the bottom elevation of sediment basin 2 is not located below the seasonal high-water table.

Reference is made to the project's Geotechnical Engineering Report which indicates that Basin 2 is located above the observed limiting zone or seasonal high-water table.

- g. Sediment basin 2; flow length-to-width requirements have not adequately been met– the location of the proposed baffles allows bypass from EW 2-0 to the emergency spillway.

The baffles have been moved to eliminate bypass from the endwall to the emergency spillway.

- h. Provide a demonstration that the discharge points will not cause erosion conditions prior to entering the receiving waters.

OS-1D and EW 3-0 have been adjusted to not create erosive conditions prior to entering the receiving waters.

6. §102.4(b)(5)(ix) Plan drawings.
 - a. Compost filter socks ends do not adequately point upslope in several locations, per the detail and ES Manual; please address.

All compost filter sock ends have been revised accordingly to point upslope.

- b. Identify the compost filter sock in between socks # 4 and #5 and provide sizing information on ES worksheet 1 and ES plan drawings.

The subject compost filter sock has been labeled on the E&S Plan and added to Worksheet #1.

- c. A stabilized conveyance has not been provided from EW 3-0, EW OS-1D, the Sediment Basin #1 emergency spillway, or Level Spreader #1/EW OS-2C.

Riprap aprons have been updated to provide stabilized conveyance. The forested riparian buffer is being reinforced with SC-250 matting to provide stabilized conveyance beyond the level spreader.

- d. Sediment Basin 1; spillway grading between the forebay and basin is unclear. Please ensure that forebay spillway does not bypass the baffle.

The forebay spillway riprap has been adjusted to ensure that runoff does not bypass the baffle.

- e. Erosion control matting has not been provided at the diversion berms on the ES plan drawings, in accordance with design calculations.

The Diversion Berm detail has been revised to depict erosion control matting as required in design calculations.

- f. Rip-rap apron OS-1D is not constructed on level ground (side to side) per the PA BMP Manual specifications; please adjust.

OS-1D has been revised to be shown on level ground.

- g. Provide additional clarification on the ES plan drawings identifying post-construction stormwater management details.

"PERMANENT" has been added to the titles to the PCSM details on the E&S Plans relating to the permanent items.

- h. Sediment basins 1 and 2; erosion control matting or turf reinforcement matting has not been provided on emergency spillway crests.

Erosion control matting has been adjusted on both emergency spillways.

- i. Provide the locations of erosion control matting on the ES plans for all swales.

Erosion control matting has been on the E&S Plans for all swales.

- j. Provide the locations of proposed diversion socks on the Phase 2 plans as they will still be functional in that phase.

The diversion socks are not required on the Phase 2 E&S.

- k. Clarify grading of the proposed top of slope berm. It is unclear where stormwater will be diverted to with the installation of the berm – provide additional information as well as stability calculations for concentrated flows as needed.

Top of slope berms were placed erroneously and not needed. The proposed grading provides positive drainage away from the slope toward inlets situated within the truck court. Flow arrows have been provided on the plan for further clarification.

- l. Identify the location of the landscape berms on the ES plan in accordance with the ES sequence of construction.

The landscape berms are now depicted on the E&S Plans.

- m. Rock filter outlet detail; provide notes identifying specifications for use in special protection watersheds/ABACT standards.

The Rock Filter Outlet detail has been revised to include ABACT standards.

- 7. §102.4(b)(5)(xiii) Identification of potential thermal impacts to surface waters of this Commonwealth from the earth disturbance activity including BMPs to avoid, minimize or mitigate potential pollution from thermal impacts.
 - a. Clarify thermal impact statement for controls during construction.

Additional information has been added to the thermal impact statement for clarification of controls during construction.

- 8. §102.4(d) A person proposing or conducting an earth disturbance activity shall obtain the other necessary permits and authorizations from the Department.
 - a. It appears that work may be proposed within the floodway of UNT to Jordan Creek, which would require a Chapter 105 Permit from DEP. Please contact Matthew Miller or Justin Dresch of DEP NERO at 570-826-2511 for a permit determination and note any permits required in the response letter and revise the Application, if necessary.

Our office has reached out to Matthew Miller and Justin Dresch of PADEP NERO but have not received a response to date. The minimal work being performed within the assumed 50' floodway of the unnamed tributary is a waivable activity given the upstream contributing drainage area.

- 9. §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. NPDES Application page 1 & 2 – The pre- and post-construction impervious areas in the application should be revised for consistency with the DEP Spreadsheet.

The pre and post-construction impervious areas have been updated to be consistent.

- b. NPDES Application page 3 – Please note that Act 537 approval/exemption is required prior to initiation of earth disturbance. A copy should be provided to LCCD.

Acknowledged. A Component 2 Sewage Facilities Planning Module has been completed for a private on-lot septic system to serve the project. It is currently waiting for Lowhill Township to sign it so it can be submitted to PADEP for final approval.

- c. NPDES Application page 3 – Discharge points are defined as “engineered structures, drainageways and areas of concentrated flow where runoff leaves a project site, except for areas of shallow concentrated flow that are controlled by perimeter BMPs.” Discharge points may be situated at or near surface waters or at another location, at or prior to the project site boundary. As such, it appears that there are only two distinct discharge points (both during- and after-construction) – DP001 & DP002. It appears that the UNT to Jordan Creek (currently identified as DP003) will only receive sheet flow. Please review and clarify/revise as necessary.

DP003 is required by Lowhill Township and the Act 167 Plan for Jordan Creek. DP003 includes disturbed area directly tributary to it in addition to the upstream areas for DP001 & DP002. Reference is made to the response to Comment 14e herein for a complete breakdown of each DP.

- d. General Information Form (GIF), Project Information – The response to Box 3 should be revised as Act 14 Municipal/County Notifications were utilized.

The GIF has been revised accordingly and is included with the resubmission.

- e. Act 14 Municipal/County Notifications – Please provide dated green card return receipts or the tracking information from USPS.com (Lowhill Township, Lehigh County).

All Act 14 Municipal / County Notifications including green card return receipts were previously provided; however, they are being provided again with this resubmission.

- f. Pennsylvania Natural Diversity Inventory (PNDI) – The PNDI response has been completed to indicate that bog turtle habitat is absent (May 16, 2022). However, the provided Bog Turtle Habitat Phase 1 report indicates that Wetlands C, D, E, F and K are suitable habitats. The Phase 1 also recommends that development within 300 feet should be avoided or a Phase 2 be conducted. At a minimum, it appears that the PNDI should be revised and a clearance/concurrence letter from USFWS should be submitted. Additionally, any avoidance measures should be incorporated into the construction sequence and setbacks should be depicted in E&S and PCSM plan view.

The updated PNDI Receipt is included with this resubmission. Given that the PNDI Receipt is signed by a qualified bog turtle specialist, Mr. Robert Bull, no additional coordination is required. The prior Phase 1 Bog Turtle Study was provided in error and prior to Mr. Bull evaluating the site.

- g. PNDI – Due to recent Inventory update, DEP now requires that all PNDI receipts that accompany permit applications should have a date of March 31, 2023 or later. This includes PNDI receipts for amendment applications for proposed additional earth disturbance. If there is a concern with the Northern Long Eared Bat (NLEB) (avoidance measures or potential impact), you will need to resolve any possible issues with the jurisdictional agencies prior to permit issuance/authorization.

The updated PNDI Receipt is included with this resubmission. No additional coordination is required.

- h. Module 2, PCSM Plan Information, box 6 – The information provided on the referenced PCSM plan sheet does not identify whether the geologic formations or soil conditions present have the potential to cause pollution. Please revise.

The Martinsburg Formation in Pennsylvania does not inherently present potential pollution. See revised note on Sheet SW 15.1.

- 10. §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. If any design changes made as a result of the above referenced E&S deficiencies should impact the PCSM plan, please make the necessary revisions and list them in the response letter.

Acknowledged. All changes have been made accordingly to all plans and documents.

- 11. §102.8(d) Separate plan. Unless otherwise approved by the Department, the PCSM Plan must be separate from the E&S Plan and labeled “PCSM” or “Post Construction Stormwater Management Plan” and be the final plan for construction.
 - a. PCSM plan drawing SW 14.1 – The E&S Sequence of Construction should be removed from the PCSM plan drawings. A relative sequence of PCSM BMP construction should be provided.

The E&S Sequence of Construction has been removed from Sheet SW 15.1. A relative sequence of PCSM BMP construction has been added on Sheet SW 15.1.

- 12. §102.8(e) PCSM Plan preparer requirements. The PCSM Plan shall be prepared by a person trained and experienced in PCSM design methods and techniques applicable to the size and scope of the project being designed.
 - a. Since structural BMPs are proposed, the PCSM plan sheets and narrative should be signed and sealed by the responsible professional engineer.

The PCSM Plans and PCSM Report are both signed and sealed by a Professional Engineer responsible for the project.

- 13. §102.8(f)(5) An identification of the location of surface waters of this Commonwealth, which may receive runoff within or from the project site and their classification under Chapter 93 (relating to water quality standards).
 - a. Page 1 of the PCSM Narrative identifies all onsite wetlands to be Exceptional Value (EV) since they are located within the floodplain of a Natural Trout Reproduction stream. The following comments should be addressed:
 - i. Please revise the Chapter 93 classification across all application materials for consistency (i.e. NPDES application, plan drawings, etc.).

The Chapter 93 designation has been updated accordingly across all plan sheets.

- ii. 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 PCSM Report has been revised to include discussion relative to these characteristics. All supporting calculations are provided within Appendix C of the PCSM Report.

- iii. The pre-construction rates for all year storm events and the volume of the 2- year storm event should be replicated. Release conditions of the stormwater to the EV wetland(s) should also be replicated according to pre-construction conditions as not to deprive any of the wetland(s) of stormwater. The stormwater management design currently presented (peak rate and volume control) should be revised accordingly.

The Act 167 Stormwater Management Plan for Jordan Creek requires that the peak discharge rate for a 2-year / 24-hour storm event be reduced to 30% of the pre-development peak discharge rate. As such, this impacts the peak discharge rates of the larger storm events. The project's design has been revised to the greatest extent practicable to achieve all stormwater management requirements while providing hydrology to the analyzed points of interest in the same manner as currently exists.

14. §102.8(f)(8) Supporting calculations.

- a. PCSM Narrative, page 4, Summary of Watershed Areas – The total post-development acreage stated (64.45 acres) is inconsistent with the summation (66.45). Please revise.

This inconsistency has been revised to show the correct post-development acreage.

- b. DEP Spreadsheet, pre- and post-construction cover conditions – It appears that some of the acreage values were entered with more than two decimal places (pre-/post- construction conditions, water quality undetained areas, etc.). As such, the actual Spreadsheet data entries should be provided.

The worksheets have been modified to account for the rounding error.

- c. DEP Spreadsheet, post-construction cover conditions – The post-development impervious cover types utilized do not appear consistent with the industrial nature of the site. Please review the DEP Spreadsheet instructions (page 8) for clarification on the various cover types and revise as necessary. Additional revisions to the water quality demonstration may be necessary.

The post-construction cover conditions have been revised to better represent the industrial nature of the site.

- d. DEP Spreadsheet, post-construction cover conditions – The DEP Spreadsheets for DP001 & 002 indicate meadow areas in post-development. Please clarify the location(s) of these meadow areas in plan view. The maintenance of these areas must also be addressed by the PCSM plan drawings.

Meadow areas are now depicted on the plans with labels. A hatch pattern has also been added to the legend.

- e. DEP Spreadsheet, pre- and post-construction acreages – A summation of the DP001 and DP002 Spreadsheets revealed inconsistent acreages from pre- (12.57 + 10.72 = 23.29 acres) to post- (10.74 + 14.15 = 24.89 acres). Please revise so that the pre- and post-construction values match.

DP003 accounts for an additional 5.08 acres in pre-development and 3.04 acres in post-development of undetained disturbance. Therefore, DP003 encompasses the undetained disturbance in both the pre-development and post-development stages, including the disturbance from DP001 and DP002.

To ensure consistency, the acreage would be as follows:

Pre-construction acreage: 12.55 acres (DP001) + 11.22 acres (DP002) + 5.08 acres (DP003) = 28 acres

Post-construction acreage: 10.44 acres (DP001) + 15.39 acres (DP002) + 3.04 acres (DP003) = 28 acres

By incorporating the additional disturbance accounted for in DP003, the revised calculations now yield a pre-construction acreage of 28 acres and a post-construction acreage of 28 acres which is consistent with the provided DEP Spreadsheets.

- f. DEP Spreadsheet, pre- and post-construction acreages – The pre- and post- construction total acreages (23.29 acres & 24.89 acres) are inconsistent with the current limits of disturbance (28.0 acres). Please revise so that the evaluated acreage is equal to or greater than the LOD.

Same response as Comment 14e. above.

- g. DEP Spreadsheet, Structural BMP Volume Credits – The following comments should be addressed:
- i. Drainage area maps and calculations to support the Incremental BMP Drainage Area and Volume Routed to BMP could not be located in the PCSM narrative. Please provide. Since the peak rate analysis includes offsite drainage areas, those values cannot be used in the design of volume control BMPs 1-3.

The LOD has been added to the drainage area exhibits showing the area that is being used for volume control. HydroCAD calculations are also included in the PCSM Report to support the incremental BMP drainage area and volume routed to the BMPs.

- ii. The drawdown calculations found in the PCSM Narrative were for the 100- year drawdown, not the 2-year storm event required by the DEP Spreadsheet. Please provide.

2-year / 24-hour storm draw down calculations are now provided in the PCSM Report.

- h. DEP Spreadsheet, water quality worksheet – Calculations to support the Pervious Undetained Area Credits could not be located in the PCSM Narrative. Please provide.

The Pervious Undetained Area Credits are not necessary to satisfy the water quality requirements for this project. As such, the subject credits have been removed.

- i. DEP Spreadsheet – A summary DEP Spreadsheet is not required (“DP003”), but should be revised for consistency if resubmitted.

DP003 shows undetained areas within the LOD that are not tributary to DP001 and DP002. DP003 is also required by the Municipality to ensure that the site is in compliance with Lowhill Township & Act 167 Plan requirements.

- j. Act 162 Riparian Buffer impacts – The following comments should be addressed:
- i. Module 4 has been completed to indicate one exception and one allowable activity. Per the NPDES Application Instructions page 28, a separate sheet should be attached to the Module which describes how the project partially meets these activities. It appears that there are other activities which are also allowable activities (i.e. storm drainage, etc.) and others which do not fit those classifications, and will require replacement buffers (3:1 grading, retaining walls within buffer limits).

Module 4 has been revised as there are no exceptions for this project. Additionally, construction for storm drainage under the allowed or allowable activities has been checked on Module 4. These areas are also tabulated and called out on Sheet BP 8.0.

- ii. In order to demonstrate and assess compliance with Act 162, the E&S and PCSM plan drawings should depict the following setbacks: 150-foot from top of bank of a “perennial or intermittent river, stream, or creek, or lake, pond, or reservoir” and 100-feet of any/all surface waters (including wetlands). This could be accomplished on PCSM sheet SW 13.0.

Setbacks of 150-feet from perennial / intermittent streams and 100-feet from surface waters have been added to Sheets BP 8.0 and SW 14.0.

- iii. In order to demonstrate and assess compliance with Act 162, the application materials should be revised to delineate the riparian buffer impacts (exceptions, allowable activities, activities requiring replacement riparian buffers, etc.) and replacement buffer areas. This should include a plan view depiction as well as a tabulation to demonstrate compliance.

An Act 162 plan has been prepared to delineate all riparian buffer impacts, including allowable activities, activities requiring replacement and replacement buffer areas. This sheet includes all information needed for the buffer installation, maintenance, and monitoring. A tabulation of the disturbed areas and the replacement areas can be found in the Legend on Sheet BP 8.0.

- iv. Replacement riparian buffer areas cannot be credited as a voluntary riparian forest buffer (a PCSM BMP under 102.14(e)(1)). Those voluntary buffer areas must be identified separately and meet the requirements of 102.14(b) & (c).

The riparian buffer areas used as replacement riparian forest buffer has been revised to no longer include the BMP callout and meet the requirements of 102.14(b) & (c).

- v. A Riparian Forest Buffer Management Plan is required under 102.14(b)(4). At a minimum, a planting plan, maintenance schedule and inspection schedule should be provided. The PADEP guidance document entitled “Riparian Buffer or Riparian Forest Buffer Offsetting” (PADEP document number 310-2135- 003, dated 3/21/2015) should be used in preparing such a plan. Please provide. Some of the information provided on PCSM plan drawing LA 7.2 could be utilized. Despite the co-mingled nature of the replacement buffers and the voluntary riparian forest buffer, a single riparian buffer management plan could be provided.

An Act 162 plan has been prepared to delineate all riparian buffer impacts, including allowable activities, activities requiring replacement and replacement buffer areas. This sheet includes all information needed for the buffer installation, maintenance, and monitoring. A tabulation of the disturbed areas and the replacement areas can be found in the Legend on Sheet BP 8.0.

- vi. The riparian buffer zone widths, planting schedule and planting detail currently identified on PCSM plan drawings LA 7.1 & 7.2 are inconsistent with the requirements of 102.14(b)(1) & (2) (related to dimensions and composition). Please revise.

The riparian buffer width has been updated to include special protection water zone widths; Zone 1 at 50 feet with proposed tree plantings and Zone 2 at 115 feet with both tree and shrub plantings.

- k. Voluntary Riparian Forest Buffer – Level spreader calculations could not be located in the PCSM Narrative. Please provide. The level spreader should be designed in accordance with Appendix G of the E&S Manual.

Level spreader calculations for the proposed level spreader downstream of Basin #2 are now provided within the PCSM Report.

15. §102.8(f)(9) Plan drawings.

- a. Provide and label all existing and proposed right of way and easements on the PCSM plan.

All existing and proposed rights-of-way and easements have been labeled on the PCSM Plan.

- b. PCSM plan drawing SW 13.0 – The following comments regarding the NPDES/Limits of Disturbance (LOD) boundary should be addressed:

- i. Please revise the line type for clarity relative to other features (i.e. property line, etc.). Alternatively, the boundary could be offset from the property line and labelled as such.

The subject line types have been revised accordingly to provide more clarity on the plans.

- ii. The NPDES/LOD boundary should be revised to encompass all proposed BMPs (i.e. BMP ID 004 – water quality filter in Betz Court), all earth disturbance (i.e. tree plantings near Channel #2B, etc.), or both (i.e. BMP ID 003 – Forested Riparian Buffer, etc.).

The NPDES/LOD boundary has been revised accordingly to include all BMPs and earth disturbance areas.

- iii. Based on the water supplier correspondence provided, the water extension will be constructed in conjunction with two other projects. To ensure adequate permit coverage, the E&S and PCSM plan drawings should depict and label the limits of that waterline extension project and the connection point for this project.

The NPDES/LOD boundary has been revised accordingly on the E&S and PCSM Plans to include all waterline extension construction work associated with this project.

- c. PCSM plan drawing SW 13.0 – The secondary sewage disposal areas should be depicted in plan view to ensure adequate clearance to infiltration BMPs.

As reflected in the project's Component 2 Sewage Planning Module, only a primary sewage disposal area is being proposed for this project. The project will contain a detailed operation and maintenance agreement with the Township which will be reviewed and approved by PADEP once submitted. As a result, no change is required.

- d. PCSM plan drawing SW 13.0 – Please revise the PCSM plan drawings to provide basic spot elevations for the retaining walls.

Spot elevations have been added on the plan for the retaining walls.

- e. PCSM plan drawing SW 13.0 – Proposed tree lines should be provided in locations where earth disturbance appears to impact the limits of existing woods (i.e. Channel 2A, sanitary force main, grading areas around BMP 002, etc.).

The proposed tree line has been added on the plan to show the limits of clearing according to the proposed improvements.

- f. PCSM plan drawing SW 14.0 – There appear to be concentrated flows proposed in multiple locations without adequate conveyance or outlet protection (i.e. west end of BMP 001 fill slope, existing/proposed grade interface north of inlet 2-1, existing/proposed grades east of inlet 2-6, etc.) Please review and clarify/revise.

Except for Inlet 2-6, which is in an area of cut and does not have any areas of concentrated flows, the grading has been modified to prevent concentrated flow in these areas.

- g. Please provide installation details for the permanent E&S matting on the PCSM plan drawings (i.e. staple pattern, etc.).

The E&S matting details including the staple patterns have been added on the PCSM Plan details.

- h. Please provide BMP stage-storage information on the PCSM plan drawings (i.e. BMP 001 & 002).

The BMP stage-storage information for both basins is provided on Sheet SW 1.2.

- i. PCSM plan drawings LA 7.1, LA 7.2 & SW 14.2 – The detention basin construction detail(s) should be revised to provide complete stabilization specifications. Per page 15 of the DEP Spreadsheet Instructions: “seed mixes may be used in addition to plug plantings but must not be the only form of vegetation planted to qualify for ET credit”. It is recommended that the selected landscaping is tolerant of saturated conditions.

The basin construction details have been updated accordingly to include complete stabilization specifications, plantings and seeding tolerant to saturation where applicable. ET credit is only being taken within Basin #2.

- j. Due to high infiltration test rates, the infiltration basin construction (BMP 1) proposes the use of an engineered soil mixture. The following comments regarding the engineered soil mixture should be addressed:

- i. The engineered soil mixture preparation, installation and infiltration testing should be identified as critical stages of PCSM Plan implementation.

The engineered soil mixture preparation, installation and infiltration testing has been added to the critical stages of PCSM Plan implementation on Sheet SW 15.1.

- ii. The infiltration basin construction sequence and/or conversion sequence should detail the preparation, installation and testing of engineered soils. It appears that a final infiltration rate of 2.0 inches per hour is desired.

The infiltration basin sequence of construction has been revised to detail the preparation, installation and testing of the engineered soils to achieve the 2.0 inches per hour design rate.

- iii. Full specifications of the engineered soil mixture should be provided on the PCSM plan drawings. The mixture provided in the infiltration basin construction detail on sheet SW 14.2 is incomplete.

Soil mixture contents are now included on the infiltration basin construction detail provided on Sheet SW 15.1.

- k. PCSM plan drawing SW 14.1 – For clarity, please consider revising the soil resolutions list to include only the applicable items.

The soil resolutions list on Sheet SW 15.1 has been revised accordingly.

- l. PCSM plan drawings SW 14.1 & SW 14.2 – Please remove the duplicative water quality filter construction sequences on the noted plan sheets.

The installation notes on the detail provided on Sheet SW 15.2 have been removed accordingly.

- m. PCSM plan drawing SW 14.1, “Ownership & Maintenance of SWM/BMP Facilities” notes – The following comments should be addressed:
 - i. To ensure clarity during construction, please move the BMP construction sequences to a separate heading on the plan sheet.

The sequence of construction and ownership & maintenance of BMPs have been separated on Sheet SW 15.1 for clarity.

- ii. Please remove BMPs not credited as part of this proposal (i.e. re-vegetate using native species, minimize total disturbed areas, etc.).

BMPs not credited in the proposal have been removed from the sequence of construction and operation & maintenance.

- iii. Due to the differing functions between BMP 1 & 2 (infiltration versus detention), please provide separate sequence of construction and O&M notes for these distinct BMP types. Please refer to the PCSM BMP Manual for additional information.

Separate sequence of construction and operation & maintenance have been provided on Sheet SW 15.1 for these BMPs. The sequence of construction and operation & maintenance provided is more thorough than the information provided in the PCSM BMP Manual.

- iv. A basin conversion sequence should be provided for each basin that will be utilized as an E&S BMP during construction. The conversion could also be integrated into the basin construction sequence.

The basin conversion sequences are provided under the “Sequence of Construction of SWM / BMP Facilities” section located on Sheet SW 15.1.

- n. PCSM plan drawing 14.1 – The critical stages of PCSM Plan implementation should be revised for consistency with the current proposal (i.e. revegetate/reforest not proposed, etc.).

The critical stages of PCSM Plan implementation have been revised accordingly on Sheet SW 15.1.

- 16. §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. Module 2, Infiltration Information section – Please revise the checkbox entry for “Soil/geologic test results are attached” as a complete geotechnical report was found with the submission.

Module 2 for each watershed has been revised accordingly.

- b. The infiltration test results, summarized on page 7 of the Geotechnical Summary Report, revealed limiting zones within 2 feet of the BMP bottom elevation for both BMPs. Please revise Module 2 Infiltration Information for both BMPs to identify limiting zones. It appears that the limiting zone encountered at IT-5 will be within the infiltration basin forebay. PCSM BMPs should be designed with a 2-foot minimum separation between the infiltrative surface and any limiting zones.

Basin #2 and the forebay within Basin #1 are not designed for infiltration; however, two (2) feet of separation is being provided to the limiting zone due to over excavation of existing subsoils as depicted on the design details. Reference is also made to Box 9 in Module 2 for each watershed.

- 17. §102.5(m)(3)(i)(B) [The Department] will provide an opportunity for interested members of the public, Federal and State Agencies to provide written comments on a proposed general permit.

- a. Please find attached to this letter, public comments received by the Department for this application. Please provide a written response to the 5 comments in the resubmission.

Responses to these public comments provided are located at the end of this response letter.

- 18. §102.11(a)(1) BMP and design standards. A person conducting or proposing to conduct an earth disturbance activity shall: Design, implement and maintain E&S BMPs to minimize the potential for accelerated erosion and sedimentation to protect, maintain, reclaim and restore water quality and existing and designated uses. Various E&S BMPs and their design standards are listed in the Erosion and Sediment Pollution Control Program Manual (Manual), Commonwealth of Pennsylvania, Department of Environmental Protection, No. 363-2134-008 (April 2000), as amended and updated.

- a. Provide adequate E&S BMPs; adequate E&S BMPs have not been provided for demolition activities.

Additional E&S BMPs have been added on the Phase 1 E&S Plan for the demolition activities. Further, the demolition items and labels have also been added on the Phase 1 E&S Plan.

19. Please note any subsequent submittals will incur an additional Lehigh County Conservation District fee. The first revision fee is 10% of the original fee (for clarification, please refer to LCCD's web site - www.lehighconservation.org) or contact the LCCD office. §102.6(b)(3)

One (1) check in the amount of \$1,770.90 payable to Lehigh County Conservation District is being mailed to the Conservation District separately.

PUBLIC COMMENTS:

1. The potential environmental impact from proposed stormwater facilities and discharges;

The project proposes onsite stormwater management BMPs to control quantity and quality of runoff from the site in accordance with NPDES Permit and Act 167 Plan requirements while protecting existing sensitive environmental features such as wetlands, streams, natural steep slopes and riparian buffers. Currently, there are limited stormwater management controls on the existing property which has a lot of impervious area.

2. Proposed earth moving upon extremely steep slopes and to the nearby potential EV wetlands on site;

No wetlands are proposed to be impacted as part of the subject project. The project proposes 3:1 fill slopes along with retaining walls which are normal design parameters for these types of facilities and soil conditions. The Geotechnical Engineering Report provides information on the existing subsoils and there are no foreseen concerns for these proposed slopes.

3. The environmental impact on the existing forested riparian buffers;

Any impacted existing forested riparian buffers are being offset in-kind as part of the project as required through the NPDES Permit process.

4. Hydrology impacts for nearby streams and wells with proposed infiltration on steep slopes during frozen soil conditions;

The project proposes onsite stormwater management BMPs to control quantity and quality of runoff from the site in accordance with NPDES Permit and Act 167 Plan requirements while protecting existing sensitive environmental features such as wetlands, streams, natural steep slopes and riparian buffers. The points of interest analyzed ensure that post-development discharges are returned to the downstream receiving waters in the same manner as the current existing condition. Additionally, there are no existing wells near the shallow depth infiltration facilities which are ultimately are tributary to the nearby receiving waters.

5. The Lowhill Township Act 537 Municipal Plan from 1966 does NOT allow for industrial warehouse uses without public sewer or public water. Only public water is being proposed at this time for this project which does not exist.

No public sewer is available at this time. As such, a Component 2 Sewage Facilities Planning Module for private on-lot septic was submitted to the Township for processing and submission to PADEP. All Sewage Enforcement Officer comments have been addressed to date but the Township has not approved or signed the module package for submission to PADEP. With regards to public water, the Township, Lehigh County Authority and other nearby Developers have executed an agreement to extend the public water to serve this project as well as two (2) other projects.

Furthermore, in accordance with the PA DEP General Information Form-Authorization Application (GIF), provided for this NPDES permit application, the applicant has answered "NO" to questions no. 2 & 3 under the Project Information heading (pg.3). Question no. 2 is regarding informing the surrounding community prior to submitting the application to the Department, as well as, question no. 3 regarding "have you addressed community concerns that were identified?" This has not been done. Therefore, we submit that we need a public meeting, appropriately advertised, in advance, to address all of the concerns the community residents have regarding this proposed industrial warehouse project, before the applicant can receive approval for the NPDES permit by your agency. Additionally, the applicant has not received municipal zoning approval and does not comply with the Township Comprehensive Plan, especially when involving the extension water for industrial uses in a Rural Village zoned area. The applicant has replied "yes" to question no. 5 under the Land Use Information Section, indicating that they have received zoning approval from the Township.

With regards to Question #2, the surrounding community was informed about the project as part of the initial Variance submission to the Township. Further, the surrounding community was informed of the permit submission during the various public meetings held during the land development review process. Additionally, the required Act 14 Notifications for a permit submission were sent to the appropriate agencies prior to the initial permit submission to the Conservation District. Lowhill Township has been informing the surrounding community of the various steps required for land development approval.

With regards to Question #3, the main traffic and environmental concerns brought up by the surrounding community are being addressed to the greatest extent practicable through PennDOT HOP and PADEP NPDES Permit approvals. The project will contribute toward offsite roadway improvements and signage to accommodate truck traffic. The project also proposes onsite stormwater management BMPs to control quantity and quality of runoff from the site while protecting existing sensitive environmental features such as wetlands, streams, natural steep slopes and riparian buffers. Approximately 66 percent of the existing property is not being developed as part of the subject project.

With regards to Question #5, the subject project is a permitted use by right per the Lowhill Township Zoning Ordinance. Additionally, a Variance was also approved by the Lowhill Township Zoning Hearing Board to permit a building height greater than 35 feet with a private on-lot septic system.

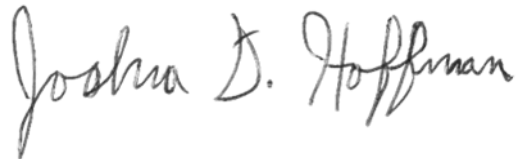
We are enclosing the following information for review:

1. One (1) copy of the revised Post-Construction Stormwater Management Plan
2. One (1) copy of the revised Post-Construction Stormwater Management Report
3. One (1) copy of the revised Soil Erosion & Sedimentation Control Plan
4. One (1) copy of the revised Soil Erosion & Sedimentation Control Report
5. One (1) copy of revised E&S Module 1
6. One (1) copy of revised PCSM Module 2 for Each Receiving Watershed
7. One (1) copy of the revised DEP PCSM Spreadsheet for Each Receiving Watershed
8. One (1) copy of the updated PNDI Receipt
9. One (1) copy of the updated NOI Application
10. One (1) copy of the updated GIF
11. One (1) copy of all Act 14 Municipal / County Notifications including green card return receipts
12. One (1) check in the amount of \$1,770.90 payable to Lehigh County Conservation District (This check is being mailed to the Conservation District directly)

If you have any additional comments or questions or require any further information in this regard, please feel free to contact me. Thank you.

Sincerely,

PENNONI ASSOCIATES INC.



Joshua D. Hoffman, P.E.
Senior Engineer

cc: Ms. Cammy Kiechel, LCCD (w/Encl., Via E-mail)
Mr. Daniel Ahn, P.E., LCCD (w/Encl., Via E-mail)
Mr. Robert J. Jevin III, P.E., PADEP (w/Encl., Via E-mail)
Ms. Jill M. Seymour, Lowhill Township (w/Encl., Via E-mail)
Mr. Ryan D. Christman, C.B.S.I., C.S.I., Keystone Consulting Engineers, Inc. (w/Encl., Via E-mail)
Mr. Fred Ferraro, CRG Services Management, LLC (w/Encl., Via E-mail)
Blake C. Marles, Esq., Stevens & Lee (w/Encl., Via E-mail)
File