pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

July 10, 2020

National Fuel Gas Supply Corporation
c/o Mr. Wayne Graham
1100 State Street
Erie, PA 16512

Re: Technical Deficiency Letter
Erosion and Sediment Control Permit
FM 100 Modernization/Abandonment Project
DEP Application No. ESG830019003-00
APS ID No 1008279; AUTH ID No. 1299840
Cameron, Clearfield, Clinton, Elk, McKean
& Potter Counties

Dear Mr. Graham:

The Department of Environmental Protection (DEP) has reviewed the above-referenced application package for Individual Erosion and Sediment Control Permit for Earth Disturbance Associated with Oil and Gas Exploration, Production, Processing, or Treatment Operations or Transmission Facilities and has identified the following significant technical deficiencies. The deficiencies are based on applicable laws and regulations, and the guidance that sets forth the DEP's established means of satisfying the applicable regulatory and statutory requirements. The Pennsylvania Erosion and Sediment Pollution Control Program Manual (E&SPC Manual) and the Pennsylvania Stormwater Best Management Practices Manual (Stormwater BMP Manual) include information that will aid you in responding to some of the deficiencies listed below.

General technical deficiencies are identified that appear to be a reoccurring technical deficiency throughout the plan narratives and drawings. Specific examples of the general deficiencies are provided for reference. However, all the specific instances may not have been identified. National Fuel should review the entire project submittal to ensure all specific technical deficiencies and general technical deficiencies have been addressed.

Technical Deficiencies

1. ***§102.5 Permit Requirements***
    a. ***Please make the following adjustments to the Notice of Intent (NOI):***
        i. Section F.e is checked that there will be no off-site discharges to locations other than surface waters. It appears there may be off-site discharges to sites other than surface waters (i.e. pond discharge at Tamarack Compressor Station). Please review the project and provide justification or adjust as needed. Likewise, Section H.d will also need to be modified, if necessary.

ii. Section H.f - Summary Description of PCSM/SR BMPs has both rate control (RC, which requires 100-year/24-hour storm) and volume control/water quality (VC/WQ, which requires 2-year/24-hour storm) checked. However, only one (1) number is given for volume treated. Please clarify that the appropriate boxes are checked and that the BMPs listed are consistent with the submitted plan.

iii. Section E.11 has "Yes" checked for potentially hazardous naturally occurring soil/geologic conditions and refers to Section 2-1 for an explanation. Section 02-01-00 is ESCGP-3 Narrative, with Section 2.4 referencing SOILS Drawings. An explanation does not appear to be given for specific hazardous conditions within the project area and how they will not cause pollution. Please clarify.

iv. Section I Antidegradation Analysis does not appear to be filled out correctly. In Part 1, "Yes" should be checked for the PCSM/SR Plan since Part 2 is filled out. In Part 2, some BMPs identified in the application were not checked (Sediment Basin with skimmer). Also, please clarify how street sweeping will be utilized. Please revise.

v. Section G Riparian Buffer references ESCGP-3 Application Section 2-1 for Riparian Buffer Request. Within this request, it mentions a buffer management and maintenance plan will be developed. Please include this plan with the application.

2. §102.6(a)(2) Pennsylvania National Diversity Inventory (PNDI) Correspondence

a. The PNDI Search Results lists a Potential Impact for the U.S. Fish and Wildlife Service (USFW) with further review required. No correspondence was provided from the USFW. Please provide that correspondence.

b. The October 08, 2019 letter from Pennsylvania Fish &Boat references specific conservation measures and best management practices from the report prepared by Herpetological Associates (i.e. for Timber Rattlesnake). It is not clear what these measures are and how they have been incorporated into the plan. Please clarify.

c. Tree cutting restrictions were listed by the Pennsylvania Game Commission (PGC) in the April 29, 2019 letter for the Silver-haired Bat in Clearfield and Elk counties, but these don't appear to be listed or addressed in plans. Please revise.

d. The PGC letter dated April 29, 2019, listed potential impacts to State Game Lands, Numbers 34, 59, and 61. They requested the Land Management Supervisor, Mr. William Dingman, to be contacted to discuss and coordinate the project on these lands. There is no documentation that this was done.

3. §102.6(a)(1) Municipal Notifications

a. Please submit the copy and proof of receipt of Acts 14/67/68/127 notification for Keating Township and Sylvania Township.

b. Regarding the Pennsylvania Historical and Museum Commission (PHMC) correspondence for the project, two letters from PHMC were provided with the application: ER 2017-2279-042-E dated June 27, 2019, and ER 2017-2279-

042-G dated October 8, 2019. Please provide all PHMC correspondence and associated responses relating to this project, including ER 2017-2279-042-A, B, C, D, and F.

4. ***§102.14 Riparian Buffer Requirements***
   - ***a.*** In Section 8.1.4 Riparian Buffers and Riparian Forest Buffers, a table with streams and waterbodies with watersheds of Rattlesnake Creek (HQ-CWF) and Beaver Meadow Run Creek (EV) is referenced, but the table is not included. This section also states that these are the only EV and HQ waters crossed by the project. These waters do not appear to be part of this project. Please clarify.

5. ***§102.4(b)(5) Erosion and Sedimentation Control Requirements***
   - ***a.*** Please ensure consistency between all construction notes. For example, Abandonment General Note No. 18 says that sediment tracked onto the roadway or sidewalk will be removed, returned to the construction site by the end of each day, while the Summary Maintenance Schedule has the sediment removed from paved roads immediately, as needed. It is preferable to have the sediment removed immediately. Please clarify.
   - ***b.*** Please include information on abandonment and flowable fill used for grouting. Will concrete washout areas need to be included where the grouting is done?
   - ***c.*** Please provide a table that lists the beginning and ending station of all pipes to be abandoned in place. The table should indicate if grouting, foam, or nothing is to be used and demonstrate that the chosen method is site appropriate.
   - ***d.*** Table 2.2-1A: Waterbodies Crossed by the Project appears to only include waterbodies crossed by the modernization portion. Please add the waterbodies crossed by the abandonment or rename the table and provide the waterbodies crossed by the abandonment in a separate table.
   - ***e.*** Table 2.2-1A has the following note for all access roads, "Existing Road, No Improvements Proposed." Narrative Section 9.2 allows for maintenance activities including gravel placement, lengthening, and/or widening of the road. The Erosion and Sediment Control & Agricultural Mitigation Plan (ESCAMP) section 10.4 notes BMPs will be installed when there is an expansion of existing access roads. It appears the designation in Table 2.2-1A may not be accurate, as the application indicates improvements may occur at access roads. Please clarify.
   - ***f.*** Please clarify how oil and gas wells within the project area will be addressed. Certain wells appear to interfere with the proposed pipeline. Specifically, Appendix E Table 6.4-1 Oil and Gas Wells within 0.5-mile of Project Construction Work Area lists an active gas well that is 7 feet from the centerline in McKean County (41.726535, -78.45189).
   - ***g.*** Please clarify if any soil testing was done to determine representative samples for seeding and mulching. The Department recommends this be done to ensure proper soil amendments and application rates for proposed seed mixtures. (E&SPC Manual Chapter 11- Seeding).

h. Were seed mixtures discussed with the Department of Conservation and Natural Resources (DCNR) and public landowners? They often have specific requirements and preferences for native species.

6. §102.4(b)(5)(ix) Plan Drawings

a. Please place a profile BMP Ribbon on the Plan Drawings.

b. Please show on the E&S Plans the installation method for streams and wetlands.

c. Please show the restoration methods at each stream and wetland crossing.

d. Please revise the plan drawings and supporting tables for consistency with station/milepost labeling. Table 2.2-1A: Waterbodies Crossed by Project and Table 6.2-1 Project Area Geologic Units both utilize milepost markers; however, milepost markers are not included in the modernization E&S Drawings.

e. For the abandonment, please clarify how the areas will be handled that are designated as Parcels Requesting Removal. Not all sections with this designation will have the pipeline removed. For example, the land owned by Michael Buhler & Sandra M is shaded as Parcel Requesting Removal, but the pipeline is proposed to be grouted in place. Please evaluate and revise it as necessary.

f. Please clarify what details will be utilized during construction – those provided with the Modernization/Abandonment Drawings or those in the ESCAMP? There are differences and inclusions/exclusions between the two sets. Specifically, regarding Streambank Stabilization, the ESCAMP BMP Drawing No. 7 shows rock riprap while the Modernization Detail Figure 18 shows natural streambed material. Additionally, the compost filter sock table in the ESCAMP Drawing No. 45C and Modernization Details Figure 4C do not match. Please ensure all details are consistent and accurate.

g. Please review to ensure ESCAMP and notes in Plan Details align. For example, Modernization General E&S Note #14 mentions sites will be stabilized within 4 days of activity cessation. The ESCAMP section 4.6 allows activity to cease for 20 days before stabilization. Please clarify.

h. Please ensure all details conform with standards in the PA E&S Manual. In the Details, Figure 4C shows pyramidal compost filter sock (CFS) stacking without decreasing sock diameter. The E&SPC Manual requires a decreasing diameter for each successive layer.

i. In the Details, the text for Figure 5 is not readable. Straw bales are not an Antidegradation Best Available Combination of Technologies (ABACT) and should be installed according to Standard Construction Detail #4-13. The compost filter sock J-hook is an acceptable alternative ABACT BMP, however, the straight portion is to be sized/designed as a diversion berm and the j-hook as a sediment trap. Please revise.

j. On the E&S Soils Plan, the resolution to Low Fertility directs the contractor to 'Table 11-3 Plant Tolerances of Soil Limitation Factors.' This table was not included with the E&S Seeding and Vegetative Tables. Please provide a copy of this table.

k. On the Abandonment/Modernization Details E&S Seeding and Vegetative Tables, a temporary mixture of winter rye is designated to be used during October 15-March 31. Please clarify how temporary stabilization will be seeded throughout the rest of the year. Additionally, permanent stabilization often requires a temporary seed for a nurse crop (See E&SPC Manual Table 11.5 Recommended Seed Mixtures for Stabilizing Disturbed Areas).

l. Please review resource impacts to ensure they have been minimized. For example, it appears that temporary direct impacts to EV PEM Wetland 125 could have been minimized by installing the temporary wetland mats on the south side of the right of way (ROW). This would result in crossing Wetland 125 at the narrowest point. Please evaluate the possibility of moving the temporary wetland mats to the south side of the ROW at this location. If this is not possible to achieve, please justify the positioning. Other wetlands to evaluate include, but is not limited to, Wetlands 004B, 007A, 007B, 009A, 009B, 010A, 010A, 010B, 031, 026, 055, 056, Stream 043, Wetlands 091, Stream 077, Wetland 094, Coleman Creek-1 crossing, Wetlands 141, 125, 148.

m. Please review stream delineations. On modernization at MP 26.6, within Wetland 125, eMapPA, StreamStats, and the Pennsylvania Fish and Boat Commission (PAFBC) Stream Mapping indicates the presence of an Unnamed Tributary (UNT) East Branch Fishing Creek (HQ-CWF). Additionally, on abandonment at MP 26.2, the limits of disturbance and pipeline appear to cross a UNT Driftwood Branch Sinnemahoning Creek (HQ-CWF). These were not provided on the plans. Please evaluate these, along with the entire plan, and include all stream delineations on plans with appropriate crossings.

n. Please ensure adequate trench plugs are installed along the proposed alignment through the project, particularly through wetlands. The E&S Notes indicate that trench plugs will be installed every 100 feet as applicable through wetlands, however, this is not shown/depicted on the drawings. Wetlands 005A, 007, and 009 are some examples. Please review the project and revise it as applicable.

7. §102.8(f)(3) Limitations of Soils and Geologic Formations

a. In the SOILS attachment, the Limiting Soils Characteristics Legend table includes a No Data entry for a few soils. Please clarify if data will be obtained for these soils, or how they will be evaluated.

McKean County

8. §102.4(b)(5) E&S Plan Requirements

a. Please confirm that no additional workspace will be needed within the permit boundary/Limit of Disturbance (LOD). In past projects, the LOD and permit boundary were the same and there was not enough workspace provided to stockpile excavated materials, construct the pipeline, and run the equipment. If more workspace is needed, it may require a major amendment. This restarts the entire review process and will hold up construction. Specifically, a

proposed utility line is right on the LOD between Marvindale Interconnect and the Compressor Station.

b. The overall plan drawings state that all disturbed areas will be restored to existing conditions. There should be an exception stating that compressor areas and mainline valve areas restoration details are provided in a separate area of the permit package.

c. Page 15 of the E&S narrative lists 0.5" as a rainfall event, this was recently clarified as 0.25" by the Department. Please update the narrative to reflect this.

d. Overall, construction sequences are showing the BMP installation after earth disturbance activity begins taking place. BMPs should be installed before any earth disturbance begins. Please clarify the construction order.

9. §102.4(b)(5)(9) Plan Drawings

a. Drawing Notes 001 General E&S notes #26 states that spoil must be placed at least 10 (ten) feet from the edge of the watercourse. Ten feet is not an adequate distance. Only trench spoil, with proper E&S BMPs, is permitted at a distance of 10 feet from the edge of a watercourse. Please clarify.

b. Drawing Notes 002 - Waterbars- Maintenance is proposed weekly and after rainfall events. In the active work areas, waterbars should be inspected at the end of each workday and repaired each evening to ensure they are in place and functional in the event of heavy rainfall overnight or on a weekend. Waterbars in inactive construction areas may be inspected on a weekly and after rainfall event basis.

c. Drawing Notes 004 - Clearing and grubbing is proposed before the installation of BMPS. BMPs should be in place before any clearing and grubbing activity occurs.

d. Site grading #2 - Rock Construction Entrances (RCEs) should be installed on access roads immediately, not following the remainder of the clearing and grubbing. It is difficult to determine the order, as RCEs are installed both during site grading and also during construction preparation activities.

e. Site grading #5 – BMPs should be in place before grading activity occurs.

f. Drawing Notes 005 - Post Construction Sequence establishes permanent stabilization before the removal of temporary wetland and stream crossings. Permanent stabilization would be disturbed upon moving contractors back in to remove the temporary crossings.

g. Upon review of aerial imagery, National Wetland Inventory (NWI) mapping, LiDAR contours, and modeled wetland mapping, six (6) areas of concern (AOC) regarding potential wetlands were identified where no data forms or photographs were provided in the Wetland Investigation Report. The approximate central coordinates along the modernization line for each of these areas are as follows: AOC 01 (41.723042, -78.459772), AOC 02 (41.742817, -78.431558), AOC 03 (along access road corridor; 41.74585, -78.323492), AOC 04 (along access road corridor; 41.777092, -78.309633), AOC 05 (along access road corridor; 41.782831, -78.306722), AOC 06 (along access road corridor; 41.775828, -78.291967). Please review these areas to determine the presence/absence of wetlands and update the plans accordingly.

10. §102.4(b)(5)(xii) Geologic Formations

a. The narrative states that impacts are minimal to non-existent throughout the project area and gives no guidance in the narrative or plans what to do should they encounter any acid mine drainage (AMD) type discharges or if they encounter any abandoned oil wells that potentially create contaminated soil. Please provide details that the contractor should follow if they encounter any unexpected geologic conditions that need to be addressed before construction continues.

Cameron County

11. §102.5(b)(5) E&S Plan Requirements

a. In the E&S Drawings, Sheets 8/86 and 9/86 show that the pipe will be dug up and removed on the Wambaugh and Stager properties within the Boyer Run Drainage near MP 25. Please include plan drawing details for the associated earth disturbance. These drawings should show the E&S BMP's and details involved in the excavation of the Boyer Run stream channel to remove the pipe.

b. Earth disturbance is being proposed within 150 feet of the drinking water source at 5309 Bucktail Trail Hwy, Driftwood, PA 15832. Grouting activity is being planned within 150 feet of the drinking water source at the Cable Property near MP 23.1. Please identify these drinking water sources in the E&S Plans.

c. No E&S BMPs are being shown on the plans for the removal of the 872 & 873 rectifier facilities near MP 29.7. Please include.

d. The E&S Plans show 1,000 feet of new access road construction to access Rectifiers 872 & 873 for their removal. This access road will involve grubbing and clearing of trees along 1,000 feet before the road joins the existing Grove Run Trail state lease camp access road. It creates 30,000 square feet of additional earth disturbance. Please show appropriate E&S BMP's on the plans for this earth disturbance.

e. Upon review of aerial imagery, NWI mapping, LiDAR contours, and modeled wetland mapping, six (6) areas of concern (AOC) regarding potential wetlands were identified where no data forms or photographs were provided in the Wetland Investigation Report. The approximate central coordinates along the abandonment line for each of these areas are as follows: AOC 10 (41.407086, -78.114003), AOC 11 (41.380836, -78.112781), AOC 12 (along an access road; 41.360103, -78.126967), AOC 13 (along an access road; 41.346656, -78.137972), AOC 14 (41.3321, -78.186611), AOC 15 (along an access road; 41.331814, -78.198517). Regarding AOC 10, EV Wetlands have been identified in the headwaters of Lick Island Run 200 to 300 feet south of MP 30.8. These wetlands are located on the pipeline and immediately to the east of the pipeline. Please review these areas to determine the presence/absence of wetlands and include on the plans, with any appropriate BMPs.

f. Several of the Rock Construction Entrances (RCEs) are proposed on severe grades. At the SR 120 South Access, the first 20 feet of the RCE is on a 70%

grade and the overall RCE grade is 45%. The initial 20 feet of grade on the Rectifier 174 Access Road RCE also has a 70% grade, with an overall grade of 30%. Furthermore, the RCEs to access the start grout location near MP 23 and to remove the valve facilities at MP 33.4 are being proposed with 34% grades. The maximum percent grade is not specified in the E&SCP Manual. However, these slopes appear too severe for construction vehicle access and for the RCE to function effectively. Please clarify.

12. §102.6(b)(1) Fees

a. Please adjust the total earth disturbance for Cameron County to incorporate the additional 0.7-acre earth disturbance involved in the Rectifier 872 & 873 Access Road and send appropriate remittance ($100) to the DEP Clean Water Fund for the earth disturbance fee.

13. §102.14(a)(1) Riparian Buffers

a. There are multiple concerns with the proposed SR120 North Access Road. Currently, the construction parallels Johnson Run (EV) and would impact 1.3 acres of riparian forest buffer. A waiver was originally requested; however, an existing access road is located west of Johnson Run on private land that can serve this location. Please confirm the alternative access road will be used and include updated plans.

Clearfield County

14. §102.4(b)(5) E&S Plan Requirements

a. Access to the "grout insertion location" and "end grout location" sites shown on alignment sheets 18/86 near the railroad will be problematic because of the ongoing mining operation straddling the pipeline ROW and proposed access roads. Additional timber mats may provide access to the site, otherwise, the current plan of access should be adjusted. Please evaluated and revise as necessary.

b. Concerning the same grout insertion location just west of the railroad, two 18" compost filter socks are shown upslope. Please clarify if these are meant to be placed on the downslope, or if they are meant to act as berms to divert water away from the area of construction.

c. Please provide more information on the grouting process. If a washout is needed, please include on the plan. Otherwise please clarify how grouting will be performed without a washout.

d. Please provide additional information on seeding, particularly for steep slopes. Will a nurse crop be utilized? Will all steep slopes be handled the same? Table 11.5 in the E&SPC Manual provides slope stabilization guidance.

e. Upon review of aerial imagery, NWI mapping, LiDAR contours, and modeled wetland mapping, two (2) areas of concern (AOC) regarding potential wetlands were identified where no data forms or photographs were provided in the Wetland Investigation Report. The approximate central coordinates along the

abandonment line for each of these areas are as follows: AOC 20 (41.240067, -78.432572), AOC 21 (41.231414, -78.464011). Please review these areas to determine the presence/absence of wetlands and update the plans as appropriate.

f. Please note – there is an active surface mine near abandonment milepost 0.3, permitted as an Industrial Mineral Mining Operation with an NPDES discharge. If not done already, there should be communication to ensure no overlapping permit, or other, implications.

15. §102.4(b)(5)(xii) Geologic Conditions

a. Could not identify review for potential geologic conditions that may cause adverse environmental impact, nor disposal directions of such potential material. There is a specific concern with the pyritic rock in this area.

Elk County

16. §102.4(b)(5)(ix) Plan Drawings

a. Insufficient information has been provided to accurately measure slope length to the compost filter sock (CFS). For example, near the Medix area of Elk Co., the map is cut off before the top of the slope. This prevents us from measuring the full length. This should be checked for all areas where CFS is proposed. Additionally, we would recommend checking the sizing calculations. It appears likely that the CFS is undersized in a few locations. *Note: Similar figures based upon data from other states are not acceptable substitutes for Figure 4.2.*

b. Insufficient information has been provided on the site access. If new roads will need to be built, this should be included in the E&S plan & LOD. If existing roads are in good, working condition, again, this should be shown on the plan and documented. For example, it is unclear how the west side of Medix Run will be accessed to perform the end grout.

c. Additionally, when more information is provided on the site access, please ensure access roads conform to the E&SPC Manual, "*Access roads should be located above flood plains and avoid drainage courses wherever possible or have proper drainage measures installed."*

d. Upon review of aerial imagery, NWI mapping, LiDAR contours, and modeled wetland mapping, four (4) areas of concern (AOC) regarding potential wetlands were identified where no data forms or photographs were provided in the Wetland Investigation Report. The approximate central coordinates along the abandonment line for each of these areas are as follows: AOC 16 (41.322569, -78.253883), AOC 17 (along an access road; 41.302436, -78.317017), AOC 18 (along an access road; 41.255775, -78.356806), AOC 19 (41.255825, -78.359406). Please review these areas to determine the presence/absence of wetlands and update the plans as appropriate.

17. §102.4(b)(5)(vii) Sequence of BMP Installation and Removal

a. Following Chapter 2 of the E&SPC Manual, please provide a site-specific sequence of BMP installation and removal. For example, the first step of the Abandonment/Removal Construction Sequence only mentions ensuring that the appropriate E&S measures are in place but does not list any BMPs.

b. It should be clear that stabilization is a critical step and disturbed areas will be stabilized upon reaching final grade. The timeframes for how long each step of the process will take have not been provided. E&SPC Manual Chapter 13 is referenced in the General Conditions. This chapter states timeframes from disturbance to stabilization should be provided by the station. The right-of-way length of the disturbance at any one time should be the minimum to efficiently install the pipeline and the allowable length specified in the E&S Plan.

Potter County

18. §102.4(b)(5)(ix) Plan Drawings

a. All Access Roads/LOD should be provided on the Plan Drawings. Please remove any references to using access roads that are not on plans. ESCAMP section 10.4 indicates additional access may be obtained as necessary.

b. Construction Details do not appear to be provided for Access Road construction and it is difficult to tell how BMPs will be utilized. The information does not appear to be provided for how non-existing access roads will be constructed.

c. It is unclear on the Plan Drawings what work is to take place on the ROW for abandonment. Will roads be constructed on the ROW for access?

d. Abandonment areas should include a LOD travel lane for traversing ROW to gain access. The LOD for some abandonment areas is isolated and the access unclear. Please clearly demonstrate how all LOD areas will be accessed.

e. The timing and staging of earthmoving activities are unclear. More specifics are needed for temporary stabilization methods, trench backfilling, and permanent stabilization. Per the E&SPC Manual, in no case should an area exceeding 15,000 square feet, which is to have vegetative stabilization, reach final grade without being seeded and mulched.

f. The construction sequence should be more specific to this project and the activities to occur and not generalized.

g. Please provide specific seeding information if hydroseed mixes are to be utilized as well as the tactifier usage. Proper soil preparation and procedures should be used when hydroseeding to ensure seed makes proper contact with underlying soil and there is not any excessive abrasion of seed.

h. Scarification methods and details are missing in the restoration plan.

i. Upon review of aerial imagery, NWI mapping, LiDAR contours, and modeled wetland mapping, three (3) areas of concern (AOC) regarding potential wetlands were identified where no data forms or photographs were provided in the Wetland Investigation Report. The approximate central coordinates along the abandonment/modernization line for each of these areas are as follows: AOC 07 (entire access road corridor; 41.835519, -78.160281), AOC 08 (41.569992, -78.072894), AOC 09 (41.560889, -78.079458). Please review

these areas to determine the presence/absence of wetlands and update the plans accordingly.

19. §102.11(a)(1) BMP and Design Standards

a. Wetland Crossing ESCAMP 4/4a Detail does not show filter fabric underlayment per the E&SPC Manual. All BMP details need to conform to the standards of this manual. Additionally, Modernization Details Figure 23 does not show a filter fabric underlayment.

Tamarack Compressor Station

20. §102.4(b)(5) E&S Plan Requirements

a. Resolutions to soil limitations are not clearly described, E&S narrative only states, "it is anticipated that proposed BMPs will be sufficient to manage and control limitations." Please provide resolutions to the site-specific limitations.

b. Please clarify the presence of wetlands on the project site. Surface Water Classification of narrative mentions a wetland delineation was performed but does not note results. A hydric soil limitation is listed, and the site is nearby the Tamarack Swamp. Moreover, the construction sequence lists the delineating of wetlands in the first step.

21. §102.4(b)(5)(ix) Plan Drawings

a. Land cover is not clearly shown on E&S Plan Maps. Plan drawings have an apparent indication for tree line/forested area, however, the legend does not include a tree line.

b. Please clarify why a bio-sock diversion berm was not placed above Temporary Topsoil/Stockpile/Tree Stump Area since berm was placed above laydown areas.

c. The proposed wet pond BMP has numerous deficiencies. Due to insufficient information provided for this proposed BMP, the BMP was reviewed to take into account most of the possible aspects of the BMP. These deficiencies can include but may not be limited to the following comments. BMP's should be site-specific designs that account for all characteristics of the proposed project site. Therefore, additional information should be provided as necessary.

- ***i.*** Was the discharge point from sediment pond evaluated to demonstrate no accelerated erosion or damage from stormwater will occur? PA E&S Manual Chapter 7 – Sediment Basins, mentions this should be performed when discharge is to a location other than surface water by picking a point within 500 feet of discharge point and following bulleted items in off-site discharge factsheet, Document #3930-FS-DEP4124.
- ***ii.*** Was testing performed to determine the seasonally high water table and suitability of the wet pond location? The bottom elevation should not be located below the seasonally high water table.
- ***iii.*** The cleanout stake and detail do not appear to be provided.

iv. Please clarify embankment soil type listed on Standard Worksheet #13, SG D, since it is not one of the recommended soil types in the PA E&S Manual Chapter 7 – Sediment Basins. The recommended soils are GC, GM, SC, SM, CL, or ML.

d. The bottom elevation on the Compost Filter Sock Trap worksheet and shown on Plan Sheet 08 does not match trap contours on the E&S Map. Also, please keep in mind anticipated settlement when constructing the trap to maintain the freeboard.

e. The E&S Plans show riprap aprons for Culvert 4 and Culvert 5; however, these are not shown in the table on E&S Plan Sheet 08. Please clarify.

f. The fertilizer application rate of 150 lb/ac for the 10-10-10 fertilizer is less than the recommended 500 lb/ac recommended in the E&S Manual Table 11.2. Please clarify and justify it as necessary.

g. Worksheet #1 could not be located for compost filter socks. Please provide.

h. Channel Details do not match between E&S Plan Sheet 8 and E&S Narrative, specifically station entries for Ditch 4. Also, Ditch 6 has two entries on Worksheet 11 for what appears to be the same channel sections. Additionally, Ditch 5 has a Bottom Width:Flow Depth ratio of 12.9 for the temporary portion, which exceeds the 12:1 maximum. Please revise or justify it.

i. Worksheet #12 lists R-3 riprap as the protective lining for the emergency spillway, however Emergency Spillway Section detail on E&S Plan Sheet 09 listings the lining as Vegetated NA Green S75 or equivalent. Additionally, the emergency spillway has a bottom width of 5', less than the 8' minimum. Please clarify.

j. Please include the table in Skimmer Construction Detail #7-1 with plans. It is difficult to tell if all the information was provided.

Post Construction Stormwater Management

22. §102.8 PCSM Requirements

a. Please review all Peak Flow Summary Tables in PCSM reports. It appears the first column in many tables is labeled incorrectly as Existing Disturbed Conditions Site and is referring to Existing Undisturbed Conditions. Please clarify and revise as necessary.

b. Please note – all proposed Infiltration Trench BMPs align more with the BMP 6.4.3 Subsurface Infiltration Bed in their design and usage proposal.

c. For several sites (MLVs, OPP, Interconnect), the NS BMP 5.5.1 Cluster Uses at Each Site is checked on Worksheet 10 as a primary BMP for water quality. Per the BMP description and site design, this BMP does not apply to this project. This BMP intends to significantly reduce impervious areas and disturbance on a project site by clustering development into one small area. When choosing BMPs for water quality, please provide site-specific information on how the BMP will be utilized. Please revise.

d. Vegetated swales are proposed at several sites with a bottom width of 0.0 feet. If these are to be used for water quality, the PA Stormwater BMP Manual BMP

6.4.8 Vegetated Swale requires a bottom width of 2 to 8 feet. The Hydrologic and Hydraulic sections of the PCSM Reports mention that the vegetated swales are used for water quality, however, they are not checked on the Worksheet 10 for most sites. Please clarify.

23. §102.8(f)(9) Plan Drawings

a. Please review all permanent waterbars and clarify utilization. In McKean County, there are no permanent waterbars between station 450+00 and 630+00.

b. Please clarify plans for restoring the temporary access roads (TARs). Narrative Section 9.2 Access Roads states all TARs will be restored to original conditions following construction. Will roads have topsoil and be seeded? The site restoration plans do not appear to show that the roads have been restored.

c. Please include additional seeding information. PCSM plans reference Table 11-3 for low fertility. However, this table did not appear to be included in the plan. Please include all information that will be utilized in the seeding process.

Carpenter Hollow OPP

24. §102.6(a)(1) Permit Requirements

a. Please define the OPP acronym.

25. §102.8(f)(9) Plan Drawings

a. All PCSM Plan drawings show the proposed 20" YM58 Pipeline extending beyond the Carpenter Hollow OPP site. This is not shown on the Modernization E&S Plans or consistent with the application, as the Carpenter Hollow OPP site is the terminal location for this portion of the pipeline. Please clarify and revise accordingly.

26. §102.8(g)(2) Water Quality

a. Worksheet 4A lists Open Space as an existing condition. The only acceptable designations for existing conditions are meadow, woodlands, or impervious. Please revise.

Marvindale Compressor Station

27. §102.8(f)(9) Plan Drawings

a. The proposed NS BMP Minimize Total Disturbed Area – Grading has several deficiencies. This BMP intends to reduce site grading, removal of existing vegetation, soil disturbance, and demonstrate the design conforms with existing topography. Special value and environmentally sensitive features are identified and avoided to eliminate the need for vegetation re-establishment. Typically, these areas are located within or adjacent to the "disturbed areas" on the site:

i. All protected areas should be located, clearly delineated, and labeled on the PCSM plan and may either be located within the limit of disturbance

or a reasonable and justifiable distance between the limit of disturbance and the NPDES boundary. Please provide.

ii. The notation has not been provided on the PCSM plan that these areas are not to be subject to grading or movement of existing soils. Please provide.

iii. The notation has not been provided on the PCSM plan to have these areas delineated in the field and protected before construction. Please provide.

iv. The notation has not been provided on the PCSM plan to allow pruning, required maintenance, or additional planting of native vegetation. Please provide.

v. Overall, more specifics are needed for this BMP. Please refer to the Pennsylvania Stormwater Best Management Practices Manual, December 30, 2006, Chapter 5, Minimize Total Disturbed Area, and the checklists in Chapter 8 for design criteria to provide site-specific details for how this BMP will be utilized.

b. Please provide additional details for proposed BMP Re-vegetate Disturbed Areas, Using Native species.

i. Soil limitations table indicates soil in this area is a poor source of topsoil. Please clarify how this will be addressed.

ii. Please provide maintenance measures for this BMP. Although many traditional measures are irrelevant, management is expected, especially during the early stages. This may include inspection, mowing, reseeding, and removal of invasive species.

c. Please clarify if bio-sock diversion berms will be the same sock filling as bio-sock infiltration berms. Please provide manufacturer specs for bio-sock to demonstrate reduced permeability.

d. The proposed BMP "infiltration berms" have several deficiencies. Since an insufficient amount of information has been provided on the proposed BMP, the BMP was reviewed to take into account most of the possible aspects of the BMP. These deficiencies can include but may not be limited to the following comments. BMP's should be site-specific designs that take into account all characteristics of the proposed project site. Therefore, additional information should be provided as necessary.

i. Soils on which berms will be placed have a slow percolation limitation. Please clarify how this will not be a limiting factor for the BMP.

ii. Please provide additional information on the bio-sock media, demonstrating reduced permeability and promotion of vegetative growth.

iii. Construction Sequence on PCSM Plan Sheet 10 does not mention the conversion of Filter Sock Traps to Infiltration Berms. Steps should include removal of accumulated sediment, removal of impoundment, and steps necessary to provide infiltration capacity.

iv. Please clarify how berms will be installed and utilized, since they are in woodland areas. Installation of subsurface trenches is not recommended, as root systems can be damaged.

v. Low berm height, 24 inches or less, is recommended to prevent ponding. Ponding may be an issue since infiltration testing has not been done and soils indicate low infiltration potential. Berm #1 is designed with a berm height of 32 inches. This appears to be done for volume control. Please adjust the height or justify it.

e. Please clarify the intent for bio-sock diversion above access road. Sock appears to extend beyond the culvert.

f. Please clarify the intent for bio-sock diversion above the compressor station. Length and placement of bio-sock appear to have ponding potential.

28. §102.8(f)(2) Soil Limitations

a. Resolutions for soil limitations have not been accounted for. PCSM Report mentions "proposed BMPs will be sufficient to manage and control limitations that may be exhibited by the soils," however no specifics are provided in the report or on PCSM Plan. Please include the limitations of this site.

Marvindale Interconnect

29. §102.8(f)(9) Plan Drawings

a. The project location map on the PCSM Sheet 1 appears to show the location of the Marvindale Interconnect at the location of the Marvindale Compressor Station. Please revise.

b. E&S Plans appear to refer to this site as the KL Valve Set. Please confirm the Marvindale Interconnect plans correspond with this location on the Modernization E&S Plans.

c. Profile views shown on PCSM Plan Sheet 6 do not seem to correspond with designations on PCSM Plan Sheet 3. Section A-A and Section B-B seem to be switched. Please clarify.

d. Please include details on the PCSM Plan in the Maintenance and Inspection notes for the BMP Landscape restoration, such as inspection, remove weeds/invasive species, reseed, and mow as necessary. The PA Stormwater BMP Manual clarifies that this BMP is not, "no maintenance."

30. §102.8(g) Stormwater Analysis

a. On Worksheet 4A. existing non-forested pervious areas must be considered meadow good condition or equivalent. Please adjust entries for Open-space and Gravel.

Tamarack Compressor Station

31. §102.8(f)(9) Plan Drawings

a. On PCSM Plan Sheet 11, Bio-sock Diversion Berm is missing. The BMP label is not pointing to anything. Please revise.

b. Please provide a manufacturer spec sheet for Bio-sock to demonstrate reduced permeability.

c. Please clarify the land cover for the infiltration berm area. PCSM Sheet 12 indicates that existing vegetation/trees will be left undisturbed for this forested area. However, the Post Development map included with the PCSM Report indicates that this area will have a meadow cover.

d. On PCSM Plan Sheet 10, only two of the three stockpiles/bury areas have a Bio-sock diversion. Please clarify if the intent was to place a bio-sock above all three areas, or if there was a reason for not putting one by the third pile.

e. Please add to the berm construction sequence to remove/flush accumulated sediment from the sediment trap and to evaluate ponding area for compaction and to scarify and topsoil as appropriate.

f. Please provide resolutions to how the soil limitations listed in Table 1 of the PCSM report will be addressed.

g. Channel 1 requires a sharp bend for water to enter Channel 3. Sharp bends should be avoided in channels to limit the potential for erosion. Please demonstrate this design will be effective and not elevate the erosive potential.

h. Please include the method of dewatering sediment pond in wet pond conversion sequence on PCSM plan sheet 13.

i. The proposed BMP "wet pond/retention basin" has numerous deficiencies. Since an insufficient amount of information has been provided on the proposed BMP, the BMP was reviewed to take into account most of the possible aspects of the BMP. These deficiencies can include but may not be limited to the following comments. BMP's should be site-specific designs that take into account all characteristics of the proposed project site. Therefore, additional information should be provided as necessary.

- ***i.*** Was a seasonal water table evaluation performed for the wet pond location? As per the Pennsylvania Stormwater Best Management Practices Manual, Appendix C, Protocol 2, a 2-foot clearance should be maintained between the bottom of the proposed BMP where infiltration is to occur and any limiting zone (mottling, seasonally high water table, bedrock, etc.). The proposed BMP has the potential to have an inadequate distance as specified by the manual. Please provide testing/documentation that shows an adequate distance exists or revise the BMP as required.
- ***ii.*** Please provide safety benches as detailed in the BMP manual. Please revise the detention basin to include them and provide details on the PCSM plan.
- ***iii.*** The emergency spillway construction detail on PCSM Sheet 9 notes a bottom width of 5 feet for the spillway. The PA E&S Manual recommends a minimum bottom width of 8 feet. Please justify or revise.
- ***iv.*** The plan does not mention a 25-foot buffer. The buffer enhances habitat value, water temperature, pond health and should be planted with trees, shrubs and, native ground cover.

v. Please define major storm events for wet pond maintenance. PA Stormwater BMP manual defines it as greater than 2 inches in 24 hours.

j. The proposed NS BMP Minimize Total Disturbed Area – Grading has several deficiencies. This BMP intends to reduce site grading, removal of existing vegetation, total soil disturbance, and design to the site topography. Special value and environmentally sensitive features are identified and avoided to eliminate the need for vegetation re-establishment. Typically, these areas are located within or adjacent to the "disturbed areas" on the site:

- ***i.*** All protected areas should be located, clearly delineated, and labeled on the PCSM plan and may either be located within the limit of disturbance or a reasonable and justifiable distance between the limit of disturbance and the NPDES boundary. Please provide.
- ***ii.*** The notation has not been provided on the PCSM plan that these areas are not to be subject to grading or movement of existing soils. Please provide.
- ***iii.*** The notation has not been provided on the PCSM plan to have these areas delineated in the field and protected before construction. Please provide.
- ***iv.*** The notation has not been provided on the PCSM plan to allow pruning, required maintenance, or additional planting of native vegetation. Please provide.
- ***v.*** Overall, more specifics are needed for this BMP. Please refer to the Pennsylvania Stormwater Best Management Practices Manual, December 30, 2006, Chapter 5, Minimize Total Disturbed Area, and the checklists in Chapter 8 for design criteria to provide site-specific details for how this BMP will be utilized.

k. Please include details for BMP Re-vegetate Disturbed Areas, Using Native Species in PCSM Maintenance notes. Details may include inspection of vegetative health, necessary mowing, removal of weeds/invasive species, and reseeding as necessary.

32. 102.8(g) Stormwater Analysis

a. Worksheet 5 for Drury Run North does not appear to have the correct numbers for the Berm area and volume removed. The numbers in the worksheet for BMP 6.4.10 Infiltration Berm & Retentive Grading do not match Worksheet 5.

MLV-1

33. **§102.8(f)(9) Plan Drawings**

a. The proposed BMP 'vegetated swales' has several deficiencies:
   - ***i.*** Please add Construction detail for vegetated swales to PCSM plans.
   - ***ii.*** Please include vegetated swales in the construction sequence.
   - ***iii.*** Please clarify if check dams will be installed within Vegetated Swales. Check dams are mentioned in the PCSM Plan Maintenance section, but

not elsewhere. If provided, please document materials and interval spacing.

iv. Soil Limitations for swales include a poor source of topsoil and easily erodible. The Low Fertility resolution references Table 11-3 for appropriate vegetation, however, this table is not included in the plan.

v. Channel worksheets have a swale bottom width of 0.0 feet. The PA Stormwater BMP manual recommends a parabolic or trapezoidal shape with a bottom width from 2 to 8 feet. The vegetated swale is checked for water quality on Worksheet 10. Please clarify the design.

b. Please include details on the PCSM Plan in the Maintenance and Inspection notes for the BMP Landscape restoration, such as inspection, remove weeds/invasive species, reseed, and mow as necessary. The PA Stormwater BMP Manual clarifies that this BMP is not, "no maintenance." Additionally, a soil amendment may be necessary for landscape restoration, due to soil limitations.

MLV-2

34. §102.8(f)(9) Plan Drawings

a. The PCSM Construction Sequence does not provide details on the inlet box. Please include this in the sequence and clarify that it will be inspected by the engineer.

b. Please note – the soil at this location has a corrosive to concrete limitation and will need to be addressed for the concrete inlet box.

c. Please add an inspection of the inlet box to PCSM Maintenance and Inspection Notes on Sheet 07.

d. Please confirm inlet design, specifically from drain to trench. Box invert elevation is 1511, while the bottom of the stone trench is 1511.50. Additionally, PCSM Sheet 03 has the Inlet Invert elevation at 1511.33', while PCSM Sheet 04 has the Inlet Invert elevation at 1511'. Please clarify.

e. Please clarify if check dams will be added to the vegetated swale. They are only referred to in the maintenance section. If utilized, please include information on materials and spacing.

f. Please include details on the PCSM Plan in the Maintenance and Inspection notes for the BMP Landscape restoration, such as inspection, remove weeds/invasive species, reseed, and mow as necessary. The PA Stormwater BMP Manual clarifies that this BMP is not, "no maintenance." Additionally, a soil amendment may be necessary for landscape restoration, due to soil limitations.

35. §102.8(g) Stormwater Analysis

a. Appendix A, Rainfall Data, does not contain any information. Please revise.

MLV-3

36. §102.8(f)(9) Plan Drawings

- ***a.*** The dimensions of the infiltration trench shown on the PCSM Plan Drawing Sheet 04 do not line up with the contour area for the Pond Report in the PCSM Report. Please clarify.
- ***b.*** Please include details on the PCSM Plan in the Maintenance and Inspection notes for the BMP Landscape restoration, such as inspection, remove weeds/invasive species, reseed, and mow as necessary. The PA Stormwater BMP Manual clarifies that this BMP is not, "no maintenance." Additionally, a soil amendment may be necessary for landscape restoration, due to soil limitations.

37. 102.8(g) Stormwater Analysis

- ***a.*** On Worksheet 7, the Total Impervious Area is listed as 0.271 acres. This appears to be a typo. Please correct.

MLV-4

38. 102.8(f)(9) Plan Drawings

- ***a.*** In the PCSM Plan, Sheets 03 and 04 have the Flow arrow pointing upgradient. Please revise.
- ***b.*** The dimensions of the infiltration trench shown on PCSM Plan Sheet 03 do not line up with the contour area for the Pond Report in the PCSM Report. Additionally, since the MLV has a steep angle, please ensure the infiltration bed dimensions are specific to bed, and not MLV surface area. Please clarify.
- ***c.*** The proposed BMP vegetated swale has several deficiencies:
  - ***i.*** Maintenance and Inspection notes mention inspecting check dams for the vegetated swale, however, check dams are not included in sequence or BMP description. Please clarify if the check dams are planned. If utilized, include material for dams and spacing.
  - ***ii.*** Note – check dams are recommended for slopes greater than 3%.
  - ***iii.*** Please add the vegetated swale to Construction Sequence.
- ***d.*** Please include details on the PCSM Plan in the Maintenance and Inspection notes for the BMP Landscape restoration, such as inspection, remove weeds/invasive species, reseed, and mow as necessary. The PA Stormwater BMP Manual clarifies that this BMP is not, "no maintenance."

Pursuant to 25 Pa. Code § 102.6(c) of DEP's rules and regulations, you must submit a response fully addressing each of the significant technical deficiencies set forth above. Please note that this information must be received within sixty (60) calendar days from the date of this letter, on or before **September 8, 2020** or DEP may consider the application to be withdrawn by the applicant.

You may request a time extension in writing before **September 8, 2020** to respond to deficiencies beyond the sixty (60) calendar days. Requests for time extensions will be received by DEP and considered. You will be notified in writing of the decision either to grant or deny, including a

specific due date to respond if the extension is granted. Time extensions shall be in accordance with 25 Pa. Code § 102.6(c).

Please submit 1 hard copy of the revised E&S plan and 1 copy of the revised PCSM plan to each of the County Conservation Districts and supply digital copies of the revised E&S plan and the revised PCSM plan to Cameron County Conservation District and the DEP.

If you believe that any of the stated deficiencies are not significant, instead of submitting a response to that deficiency, you have the option of requesting that DEP to make a permit decision based on the information you have already provided regarding the subject matter of that deficiency. If you choose this option with regard to any deficiency, you should explain and justify how your current submission satisfies that deficiency. Please keep in mind that if you fail to respond, your application will be considered withdrawn.

Should you have any questions regarding the identified deficiencies, please contact Nick Rossi at 717.772.5667 or nicrossi@pa.gov and refer to DEP Application No. ESG830019003-00, to discuss your concerns or to schedule a meeting. The meeting must be scheduled within the 60 calendar days allotted for your reply, unless otherwise extended by DEP.

Sincerely,

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

cc: Mott MacDonald, LLC
U.S. Army Corps of Engineers, Baltimore & Pittsburgh District
PA Fish & Boat Commission, Division of Environmental Services
Cameron County Conservation District
Clinton County Conservation District
Clearfield County Conservation District
Elk County Conservation District
McKean County Conservation District
Potter County Conservation District
Borough of Driftwood
Gibson Township
Grove Township
Lumber Township
Huston Township
Lawrence Township
Leidy Township
Keating Township
Benezette Township

Jay Township
Liberty Township
Norwich Township
Sergeant Township
Allegany Township
Clara Township
Hebron Township
Pleasant Valley Township
Portage Township
Roulette Township
Sylvania Township
Wharton Township