August 28, 2019

Ms. Dana Drake
Pennsylvania Department of Environmental Protection
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222

Re: Response to Second Technical Deficiency Letter for Permit No. PAD630034 for the Beech Hollow Energy Project

Dear Ms. Drake:

Burns & McDonnell Engineering Company, Inc., on behalf of Robinson Power Company, LLC, submits the enclosed and revised Notice of Intent, E&S Plan, and PCSM Plan for the Beech Hollow Energy Project (Permit No. PAD630034) in response to the Second Technical Deficiency Letter received on August 6, 2019. Please see the below responses to each deficiency. Please contact me at (816) 363-7275 or sgilstrap@burnsmcd.com if you have any questions.

E&S COMMENTS:

1. **§102.4(b)(5)(vii): The construction sequence should call out the compost filter sock installation in detail.**
   Status: The construction sequence remains general, regarding the sock installation. All socks have been labeled and should be clearly called out in the construction sequence.

The construction sequence on E&S Drawing CS209 has been updated to include additional details regarding the installation of compost filter sock.

2. **§102.11(a)(1): Channels shown on the West side of sheet CS205 appear to just end. It is unclear where these channels discharge.**
   Status: It remains unclear where the channels discharge, they appear to outlet to wetland W-KR-05, where they drain from there is unclear. Will this runoff flow directly onto the site?

These channels drain to an existing ditch, shown on E&S Drawing CS207, that then drains to the South Basin and eventually to POI-2. The existing ditches north of the main entrance road do drain into wetland W-KR-05 and then into the same ditch via culvert under the road. E&S Drawings CS216, CS217, EX003, EX004, and EX005 depict these areas in the POI-2 Pre- and Post-Construction drainage areas.

3. **§102.11(a)(1): The location for pump water filter bag implementation should be noted on the drawings at the stream crossing location.**

Status: The pump water filter bag appears to be located within the stream channel. This should be in a vegetated area per typical detail notes. Refer to the E&SPC manual for additional information.

The pump water filter bag on E&S Drawing CS208 has been moved to a vegetated area.

4. **§102.11(a)(1): Review Worksheet #12 South Basin. The minimum required dewatering zone in 3600 cubic feet per acre. Worksheet #12 shows reductions in the dewatering zone below 3600 cubic feet.**
   Status: This comment has not been addressed, Worksheet #12 still shows dewatering zone reductions more than 3600 x acre.

Worksheet #12 South Basin has been corrected and is included in Appendix C of the E&S Plan.

5. **§102.11(a)(1): From the re-designed structures and revisions submitted, the following additional comments need addressed:**
   a. **Worksheet #13 for the South basin, elevation 2 does not match Worksheet #15 and the basin detail sheet. Review elevation 2, sediment storage elevation and revise.**

Worksheet #13 in Appendix C of the E&S Plan and E&S Drawing CS212 have been revised to match Worksheet #15 and calculations.

   b. **Worksheet #15 for the south basin does not match the number of perforations and rows of perforations shown on the riser detail.**

Worksheet #15 has been updated to match perforations shown on E&S Drawing CS212 and is included in Appendix C of the E&S Plan.

   c. **Reference is made to slope stabilization work to take place at the previously proposed trap. No earthwork is shown on the plans, no BMPs are shown in this area. Clearly explain what slope stabilization work will take place and shown any earthwork required to implement the stabilization.**

As stated on page 2-4 of the E&S Plan, three rows of drilled shaft reinforcements will be installed to address low strength/landslide concerns identified along the southwestern slope of the power block; see E&S Drawing CS215. Following completion of the slope stabilization work, the southwestern slope will be returned to pre-construction contours. Compost filter sock has been added to E&S Drawing CS215.

During construction, inclinometers will be installed every 250 feet along the crest of the western slope and through the soil into the underlying rock. The inclinometers will be measured periodically to determine movement of the slope and the location of any slide planes, if any movement is occurring.

d. The construction sequence should be detailed and site specific regarding the implementation of E&S BMPs. Aprons, filter socks, rock filters, channels, etc. are labeled and numbered on the plans and should be clearly identified in the construction sequence as to when they are installed and when they can be removed.

The construction sequence on E&S Drawing CS209 has been updated to include additional details regarding the installation and removal of temporary BMPs.

e. The plan drawings have been phased, review the sequence of construction consider adapting it to match the phasing.

The construction sequence on E&S Drawing CS209 has been revised to match the phased installation of E&S BMPs.

f. Worksheet #13, temporary riser crest elevation is different from that shown in the typical details for the sediment basin outlets. Review these elevations and revise. All basin standard worksheets should be reviewed for consistency with the typical details provided on the plan drawings.

The temporary riser crest elevation on E&S Drawing CS212 has been updated to match Worksheet #13.

g. Elevations #2 (sediment storage) and #3 (dewatering zone) should be marked on the stage storage curve for the sediment basins.

The stage storage curve for the sediment basins has been updated to indicate elevations #2 (sediment storage) and #3 (dewatering zone) on Worksheet #14 in Appendix C of the E&S Plan.

h. Provide details for the proposed level spreaders on the plan drawings.

Additional details for the proposed level spreader are included on E&S Drawing CS213.

PCSM COMMENTS:

1. **§102.6(a)(1): The Access Road POI(s) #1-3 are stated to discharge to a PennDOT owned MS4 system. There is a reported increase in volume in this area. As such, a letter from the MS4 owner (PennDOT) must be provided which clearly states that they are accepting the volume of stormwater increase into their system. A NPDES permit cannot be issued by the Department until this letter of acceptance of volume increase is received.**
   Status: The consultant acknowledges that the letter will be submitted once received. This letter must note the increase in volume to the system and be from the owner.

An approval letter from PennDOT will be provided to the DEP upon PennDOT's approval of the proposed stormwater discharge to its MS4 system.

2. **§102.6(a)(1): Please follow the instructions of Section D.4 in the NOI to list the volume for rate and volume/water quality that is treated. From the instructions, two separate volumes are needed. Note that this volume must be representative of an inflow BMP volume that is shown in the routing calculations.**
   Status: Please revise as D.4 lists different inflow volumes than what is shown in the routing conditions. Please uncheck vegetated swales for volume control as they are rate and water quality control.

Section D.4 in the NOI has been updated for each POI, and vegetated swales are no longer checked for volume control.

3. **§102.6(a)(1): Please revise the NOI to address the following:**
   a. **The volume reduced as shown in the NOI POIs for Box #7 cannot be greater than the amount of volume that flows into the BMP. For example, POI #1 and #3 of the Power Block Area show significantly higher reduced volumes than total post construction storm water volume for the POI drainage area?**
      Status: Section D.3 Box #7, Section D.4 (volume) and Worksheet #5 should be consistent with the routing calculation volumes for this project. Currently, these are all different. You cannot claim volume credit for more stormwater that flows into the basins or for the entire basin design volume. (Ex. POI-1 shows 36,214 cu ft flowing into the forebay, 9,980 cu ft flowing into the basin. Why are these different? From the model, the forebay volume flows into the basin so these should at least match, or the basin be larger. D.4 shows different volumes and Worksheet #5 shows even different volumes.)

Worksheet #5 has been revised for all POIs to reflect the volume of runoff entering each detention area per email and phone conversations with Jim Sommer. Section D.4 volumes have also been updated.

b. **Please revise Section D.2 to list option C. Option A can only be checked if there is a current AND approved Act 167 Plan. The Act 167 Plan noted is not approved as it is greater than 5 years old. As currently presented, you are not adhering to Option B as volume control is not being met in POIs shown within Section D.3. Option C must be checked, and a justification must be provided to how regulation 102.8(g)(2)(iv) and 102.8(g)(3)(iii) are being met. This must be within the PCSM Report.**
Status: The original comment remains, as Option A is still checked. The Act 167 plan for Washington County is not approved AND current, which means renewed by DEP within the past 5 years. Submitted was a township ordinance.

Option B in Section D.2 of the NOI has been checked as volume control is being met in each POI as shown in Section D.3 of the NOI.

c. **Worksheet #12 lists a disturbed acreage of 31.04 acres which does not match with the NOI reported disturbed acreage of 58.5 acres or the NOI Worksheet #4 disturbed acreage of 38.3 acres. There are currently three differences.**
Status: It was explained in a call on 7/31/19 that the NOI disturbed acreage is the overall site boundary. The existing acreage in Worksheet #4 is 32.5 acres while in the proposed 42.24 acres. Please explain this difference and if grading really enlarges each of these 3 POIs by roughly 10 acres? Plan Sheet CS314 shows a large portion of the site within the reported LOD not included, please explain.

It was previously explained to Burns & McDonnell that the POI to be analyzed is the point where the stormwater from the disturbed area leaves the site. The area referenced on PCSM Drawing CS314 does not drain to any proposed POI under the existing conditions. POI-2 will pick up approximately 6 acres of area with the proposed grading design; thus, the increase in post-construction acreage. Also, most of the flow picked up in POI-3 currently flows to an existing acid mine drainage collection pond (Champion Pond 3) operated by Champion Processing. As required by of the DEP, stormwater runoff from the Project site must be managed to avoid drainage to the existing acid mine drainage collection and treatment facilities owned by Champion Processing; therefore, the Project is required to redirect this stormwater from Champion Pond 3 to POI-3, thus changing the area in the pre-conditions for POI-3.

4. **§102.8(f)(9): Please revise the PCSM Plan drawings to address the following:**

a. **Provide an overall Drainage Area POI Map showing the acreage and curve numbers which correspond to Worksheet #4 and the PCSM Report for pre and post conditions.**
Status: There is a gap from sheet EX001 and EX003 which is not covered within a drainage area. This can be seen from the contours. EX006 shows a blank spot in the middle which isn't explained? Clearly explain the limit of disturbance as the areas do not expand to it.

It was previously explained to Burns & McDonnell that the POI to be analyzed is the point where the stormwater from the disturbed area leaves the site. The area referred to on PCSM Drawing CS314 does not drain to any POI under the existing conditions. POI-2 will pick up much of this area with the proposed grading design, thus the increase in post-construction acreage. PCSM Drawing CS316 shows the Post Construction Drainage Areas.

b. **The elevations on CS310 should match with the elevations with CS307 and the routing calculations, Currently, they do not.**
Status: The north basin routing calculations show a 12" outlet where CS307 shows 24 inches. The south forebay shows a basin bottom of 1,110' where CS307 & CS310 show 1,113'. Please revise and note what has been revised.

PCSM Drawing CS307 has been revised to reflect a 12" outlet pipe. PCSM Drawings CS307 and CS310 have been updated to show a basin bottom of 1,112 feet. The stormwater calculations in Appendix E of the PCSM Plan have been revised to reflect this change.

c. **Please provide a detail showing the transition of the forebay to the basin. (What type of rock is being provided on the inlet and outlet site. How is the stormwater entering the basin from the forebay etc.?) The forebay transition should not be an earthern berm as it will potentially wash away and/or erode.**
Status: Forebay details show a lip in which stormwater will not pass through the rock to the basin. Please address. Please provide protection at the bottom of this 2:1 rip-rap channel into the northern detention basin. Sheet CS310 does not show the north forebay with a liner.

A 6" pipe has been added to be able to completely drain the forebay, and details were added to PCSM Drawings CS307 and CS310. The riprap extends to the bottom of the ditch to the top of the liner and will provide protection to the HDPE liner. We did not show any surfacing on PCSM Drawing CS310 to avoid cluttering up the drawing.

5. **§102.8(f)(9): From the re-designed structures and revisions submitted, the following additional comments need addressed:**

a. Appendix B states provided in previous submittal. As DEP was only provided 1 PCSM submittal previously, an additional Appendix B would be needed to complete 2 full sets.

On copy of Appendix B of the PCSM Plan is enclosed.

b. Provide the level spreader design calculations, per the manuals.

Level spreader design calculations have been included.

c. The underground detention basin routing states a 6" outlet. Plan Sheet CS311 shows an 8" outlet and at a different elevation than the routing. The provided detail shows a 1" orifice at elevation 1105.50' on CS311 which was not included in the model. The detail also shows a weir at elevation 1105.84' not modeled. The routing calculations claim a 27.5' basin width whereas detail dimension shows 25'. The height also is inconsistent.

PCSM Drawing CS311 has been revised to show a 6" orifice installed on the detention pipes routed into CB-3. The 1" orifice and weir information is modeled in the CB-3 calculations. Revised calculations have been provided to reflect the change for the 6" orifice from the detention pipes, and the basin width has been revised to show 27.5' on PCSM Drawing CS311.

d. Per comment 3a above, please revise the plan sheet tables.

Plan sheets and tables have been updated.

Sincerely,

Sarah Gilstrap

Sarah Gilstrap, CPESC
Senior Environmental Scientist

cc: Vernon Wranosky, Burns & McDonnell
Tom Graves, Burns & McDonnell
Tim Barton, Burns & McDonnell
Robert Owens, Burns & McDonnell
Raymond Bologna, Robinson Power