



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

October 9, 2019

Bill Fink
CFC Fulton Properties, LLC
2700 Clemens Road
Hatfield, PA 19440

Re: Technical Review Comments
Bivouac Sow Farm
WQM Permit Application No. 2919201
Authorization ID No. 1279394
Ayr Township, Fulton County

Dear Mr. Fink:

The Department of Environmental Protection (DEP) has initiated its technical review of your application for a Water Quality Management (WQM) permit. We have the following comments that must be addressed before DEP may resume its technical review. Please address within 60 business days from the date of this letter:

- It appears structural fill zones and non-structural fill zones with differing placement criteria and testing requirements are proposed. Clarification is needed on the differentiation of the fill zones. Specifically,
 - The Manure Storage Facility Subgrade General Notes (hereafter referred to as "Notes") included on page 7 of the engineer's report (and reproduced on drawings BIVC202AP, BIVC302BP, BIVC402CP) refers to "subgrade" and "building subgrade" without defining the terms relative to the extents of the buildings and/or their footings. Please define subgrade and building subgrade, or provide alternative descriptions related to testing zones and structural/non-structural fill zones discussed below.
 - Item #3 of the Notes refers to an "upper" area and a "lower" area in reference to fill gradation requirements. Please clarify what differentiates the two areas.
 - Item #5 of the Notes refers to compaction density testing of fill within a 1:1 slope of the building footings. Please clarify what zones of fill this 1:1 slope defines (i.e., 1:1 upward or downward, testing above or below that line, etc.).
 - The specifications do not require structural fill to be free of deleterious materials. Also, the allowable USCS classifications of the structural fill materials are not specified. Please add these requirements to the specifications, or provide justification as to why it is not warranted.
 - In Item #4 of the Notes, the "slightly higher" moisture content specified, should rather be defined numerically as a certain percentage above optimum moisture content.
- In Item #10 of the Notes, a soil separation layer is proposed only when bedrock with open joints, fractures, or solution channels are encountered, in accordance NRCS Practice Code 313. To decrease the potential for differential settlement, DEP suggests that all

bedrock encountered under the footings or floor slabs should be over-excavated and replaced with a minimum 1-foot thickness of soil selected and placed according to the structural fill requirements. Please address.

- Test pit locations are shown on drawing S1/E010-14. However, no logs, soil profiles, or discussion of findings are included in the report or drawings. Please provide information to verify an adequate investigation of soils at least 2 feet (3 feet in areas of fractured bedrock or permeable soils) below building subgrades, as required by NRCS Practice Standard Code 313. Please include information on groundwater levels. A discussion of the site geology, based in published information and/or site observations and investigations, should also be included.
- The Engineer's Report should include a discussion of the minimum required setback distances (required by 25 Pa. Code Chapter 83) from the manure storages to wells, property lines, bodies of water, etc.
- Page 16 of the Engineer's Report refers to an Operation and Maintenance Plan within the CAFO permit application. The Operation and Maintenance Plan should be included in the certified WQM application Engineer's Report so that it may be incorporated into the WQM permit conditions.
- Please provide gradation specifications for the rockfill surrounding the pipes in the foundation/leak detection drains.
- For the gravity manure transfer pipes from the Farrowing Barn to the Gestation Barn, please provide more detailed specifications regarding the backfill around and above the pipes, the type of joints if needed, and the minimum cover.
- Please note that in accordance to NRCS Practice Code 634, the minimum diameter pipe for swine manure shall be 10 inches for pipe slopes between 0.5 to 1.0 percent, and 6 inches for pipe slopes greater than 1.0 percent. Please address.

If you will require more time to respond to these deficiencies, or to discuss the deficiencies, please contact me at 717.783.0368, or sarwood@pa.gov.

Sincerely,



Scott M. Arwood, P.E.
Environmental Engineer Manager
Clean Water Program

cc: Timothy R. Royer, P.E. (Timber Tech Engineering, Inc.)
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