



DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES

JOE FOSS BUILDING  
523 EAST CAPITOL  
PIERRE, SOUTH DAKOTA 57501-3182

[denr.sd.gov](http://denr.sd.gov)

May 16, 2016

Richard Ford  
4-F Pork Haven  
46272 200<sup>th</sup> Street  
Bruce, SD 57220-5108

Re: 4-F Pork Haven Manure Management System Expansion  
Plans and Specifications Review

Dear Mr. Ford:

The Department of Environment and Natural Resources received four copies of plans, specifications, and revised nutrient management plan for a proposed expansion at your permitted facility on March 28, 2016. The manure management system is located in the Southeast  $\frac{1}{4}$  of Section 21, Township 112 North, Range 51 West in Brookings County, South Dakota.

Your previously approved manure management system was approved for 4,000-head of finisher swine to be constructed in two phases. Phase #1 was constructed and permitted. Phase #2 was not constructed.

The permitted Phase #1 portion is for a housed lot feeding a maximum of 2,000-head of finisher swine and consists of two deep pit barns with no acres of drainage area. The deep pit barns meet the requirements of the general permit and are designed for at least 270 days of liquid storage capacity.

The Phase #2 portion was for a housed lot feeding a maximum of 2,000-head of finisher swine and consisted of two deep pit barns with no acres of drainage area. The deep pit barns met the requirements of the general permit and were designed for at least 270 days of liquid storage capacity. The Phase #2 barns will not be constructed.

The submitted plans and specifications replace the proposed Phase 2 portion and consist of a single deep pit barn housing a maximum of 2,400-head of finisher swine with no acres of drainage area. The proposed deep pit barn meets the requirements of the general permit and is designed for at least 270 days of liquid storage capacity. With the proposed expansion, the facility will consist of three deep pit barns housing a maximum of 4,400-head of finisher swine.

Richard Ford  
4-F Pork Haven  
May 16, 2016  
Page 2 of 6

The submittal also included a revised nutrient management plan which removed several fields. The revised nutrient management plan still meets the requirements of the general permit and has sufficient acres for the application of manure.

We have reviewed and hereby conditionally approve the plans and specifications for your deep pit barn and revised nutrient management plan. This approval expires on May 16, 2018, unless construction of the proposed barn has been started by that date. Requirements that you must implement are listed on the attached pages. Failure to implement the requirements on the following pages prior to operation of the manure management system will invalidate this approval.

Two copies of the approved plans and specifications are being retained for our files. If any deviations are required from the approved plans, those changes and all change orders must be approved by the department prior to construction. A complete set of as-built plans will be required if several major deviations result.

Upon completion of construction, the enclosed Notice of Completion must be returned to the department. **The deep pit barn cannot be populated or used to store manure until the department conducts a satisfactory construction inspection and issues an amended Certificate of Compliance and coverage under the general permit.** Continued compliance is dependent upon you performing proper operation and maintenance activities. You will be liable for any noncompliance with applicable South Dakota environmental laws or regulations.

Our review is primarily to assure that the system meets the requirements of the general permit and does not cover items such as, quality of material, structural soundness, electrical, and mechanical design features. Approval of the plans and specifications does not in any way release the producer from the responsibility of ensuring that the project will be an operable facility when construction is completed.

For more information on this review and approval please see the attached pages of requirements. If you have any questions regarding the content of this letter, please feel free to contact Peter Adair, Feedlot Permit Program at (605) 773-3351. Thank you for your cooperation.

Sincerely,



Kent R. Woodmansey, PE, Engineering Manager  
Feedlot Permit Program

cc: Brad Woerner, PE, Stockwell Engineers, Inc.  
Brookings County Commissioners  
Luke Muller, F.D.A.L.G

## REQUIREMENTS

The following requirements must be implemented before we will issue an amended Certificate of Compliance and coverage under the general permit. Failure to implement these requirements will invalidate this approval.

### Plans and Specifications

The plans and specifications review is to determine whether seepage, storage, and other design requirements will be met.

#### 1. Soil Boring Information

The submitted plans contain only one soil boring that meets the requirements of the general permit. The submitted soil boring meets the criteria of a deep subsurface soil boring and was completed within 200 feet of the proposed barn. A second soil boring must be completed and a soil boring log must be submitted to the department. The soil boring must also be within 200 feet of the proposed barn and must extend to a depth of at least six feet below the bottom of the proposed barn. Your engineer has indicated that a soil boring or test pit will be completed during construction of the proposed barn. Please submit the soil boring log to the department when it has been completed. **An amended Certificate of Compliance and permit coverage for the proposed barn cannot be issued until the department receives the soil boring information.** Depending on the results of the soil boring log, ground water monitoring or a ground water discharge permit may be required.

#### 2. Deep Pit Office Area

The plans and specifications indicate that there will be a deep pit area located beneath the attached office area south of the barn. This area is not attached to the deep pit beneath the barn, is not included in your design calculations, and may not be used for the storage of manure. **Please have your engineer identify the use of this deep pit.**

#### 3. Septic System

Your permit application indicates there will be an office area in the barn. The plans do not indicate if an on-site domestic wastewater system will be installed. Plans and specifications for any new on-site system, except those that are conventional on-site systems that treat domestic wastewater, must be submitted to the department for review and approval prior to construction. A certified installer must install any new on-site system. For more information contact Scott Hipple at (605) 773-3351. If an on-site system is to be installed, please submit a revised site plan indicating the location of the septic tank and drainfield.

## REQUIREMENTS CONTINUED

### General Permit

You will be required to operate your feeding operation and manure management system in accordance with the requirements in the general permit.

#### 1. Notification

Construction Schedule - You or your engineer must notify the department of the proposed construction schedule for your project to allow our personnel the opportunity for construction inspections. Please fill out the enclosed postcard and return it to us prior to beginning construction of the proposed deep pit barn. If any of the dates change from the ones submitted on the postcard, please notify us at (605) 773-3351 and ask for Peter Adair.

Other Government - You are responsible for contacting your local planning and zoning office to determine if there are any local ordinances or requirements with which you need to comply. If a stream, lake, or wetland will be dredged or filled during the construction of the feeding operation, then you need to contact the United States Corps of Engineers at (605) 224-8531 prior to construction of the manure management system.

Notice of Completion - The Notice of Completion form must be completed by your engineer and returned to the department when construction of the proposed barn is complete. The department cannot issue you an amended Certificate of Compliance and coverage under the general permit until we receive a Notice of Completion. **The deep pit barn cannot be populated or used to store manure until the department conducts a satisfactory construction inspection and issues an amended Certificate of Compliance and coverage under the general permit**

#### 2. Phosphorus-Based Nutrient Management Plan (NMP)

##### A. Annual Soil Testing

Table One lists the legal descriptions and sampling requirements for all the fields in your NMP. Annual soil samples from 0 to 2 feet are required on all manure land application fields prior to manure application. Fields identified as being located over shallow ground water require soil sampling from 0 to 2 feet and 2 to 4 feet prior to manure application. The shaded field in the following table requires 0 to 2 feet and 2 to 4 feet soil sampling.

##### B. Nitrogen-Based Manure Application

As indicated in your phosphorus-based NMP, manure application on the following fields may be based on nitrogen need as determined from the table on page 29 of the general permit. Please refer to this table prior to land application of manure to determine the proper procedure for calculating the appropriate application rate for each specific field. A current soil test and the table on page 29 must be used to determine the required application method before manure is applied to these fields.

REQUIREMENTS CONTINUED

Table One: 4F-Pork Haven - Nitrogen-Based Manure Application Fields

Field #	County	Legal Description	Available Acres	Soil Sampling Requirements 0-2 feet	
				Additional	
1	Brookings	SE ¼, Sec. 8, T112N, R52W	106.0	Yes	No
2	Brookings	W ½ of the SW ¼, Sec. 9, T112N, R52W	87.0	Yes	No
19	Brookings	W ½ of the SW ¼, Sec. 20, T112N, R51W	66.0	Yes	No
20	Brookings	W part of the W ½ of the SE ¼, Sec. 21, T112N, R51W	60.0	Yes	No
21	Brookings	E part of the W ½ of the SE ¼, Sec. 21, T112N, R51W	20.0	Yes	No
22	Brookings	SW ¼ of the SE ¼ of the SE ¼, Sec. 21, T112N, R51W	8.0	Yes	No
25	Brookings	S ½ of the SW ¼, Sec. 23, T112N, R51W	68.0	Yes	No
26	Brookings	N ½ of the SW ¼, Sec. 23, T112N, R51W	70.0	Yes	No
27	Brookings	SE ¼, Sec. 27, T112N, R51W	132.0	Yes	No
30	Brookings	W ½ of the NE ¼, Sec. 28, T112N, R51W	58.0	Yes	No
31	Brookings	NE ¼ of the NE ¼, Sec. 28, T112N, R51W	41.0	Yes	No
32	Brookings	SE ¼ of the NE ¼, Sec. 28, T112N, R51W	31.0	Yes	No
34	Brookings	E ½ of the NE ¼, Sec. 33, T112N, R51W	71.0	Yes	No
35	Brookings	SE ¼, Sec. 35, T112N, R51W	114.0	Yes	Yes
36	Brookings	SW ¼ of the SW ¼, Sec. 36, T112N, R51W	39.0	Yes	Yes
40	Brookings	W ½ of the NW ¼, Sec. 2, T111N, R51W	71.0	Yes	Yes
41	Brookings	E ½ of the NW ¼, Sec. 2, T111N, R51W	73.0	Yes	Yes
<b>Total Available Nitrogen Acres</b>			1,115.0		

Please note in your phosphorus-based NMP the estimated time it will take to build your listed fields up to 50 ppm (Olsen test) or 75 ppm (Bray-1 test) of phosphorus. You may need additional land in order to apply to your fields based on phosphorus removal at that time.

**C. Phosphorus-Based Manure Application**

As indicated in your phosphorus-based NMP, none of the listed fields currently require manure application based on crop removal of phosphorus. If future soil tests identify fields with elevated phosphorus levels, the manure application rate must be based on phosphorus removal in the harvested portion of the crop. However, manure application to these fields can be based on multi-year phosphorus crop removal but cannot exceed the one year nitrogen crop need, and no more manure may be applied to that field again until the applied phosphorus has been removed from the field via harvest and crop removal. Please refer to the table on page 29 of the general permit for the proper manure application determination.

**3. Setback Distances**

The manure management system and the application sites must be located at least 150 feet from a private well owned by you, 250 feet from a private well not owned by you, and 1,000 feet from any public supply well or other public drinking water source. These setback distances from identified wells cannot be included as part of the land application acreage.

## REQUIREMENTS CONTINUED

### 4. Field Addition Requirements

To add fields to your approved NMP, you must submit the required information for each additional field to the department for our review and approval. Required documentation includes the calculation of a RUSLE value for each field to be added. Information on adding fields to your approved NMP may be obtained from your local Natural Resources Conservation Service (NRCS) office. You may also contact us for assistance at (605) 773-3351, or visit our website at <http://denr.sd.gov/des/fp/FieldAdditions.aspx> for instructions on adding fields to your NMP. **You cannot apply manure to any fields not included in your approved NMP.**

### 5. Other Permits and Information That May or Will Be Required

Storm Water Permit - A general storm water construction permit will be required if your project construction will disturb more than one acre in total land area. Information concerning this permit can be obtained by calling William Marcouiller at 1-800-737-8676. **A copy of this plan must be kept on site during construction for review by DENR inspectors.**

Permit to Occupy Right of Way - If manure application will involve placing hoses or other equipment in a state highway right of way (for example, in a road ditch or through a culvert), you must first obtain a Permit to Occupy Right of Way. Application for this permit may be made through the local South Dakota Department of Transportation area office. Contact your local SD DOT area office for more information on this permit. In addition, please contact your county highway superintendent to determine if your county has similar requirements.

Emission Reporting - Based on the number of animals confined at your facility, you may be required to submit a continuous release report for emissions. If your facility has ammonia and/or hydrogen sulfide emissions that exceed 100 pounds during any 24-hour period, you are required to submit a continuous release report to the State Emergency Response Commission (SERC) and Local Emergency Planning Commission (LEPC). Information regarding emission reporting can be found on our website at [http://denr.sd.gov/des/gw/SARATitleIII/Emissions\\_from\\_Animal\\_Waste.aspx](http://denr.sd.gov/des/gw/SARATitleIII/Emissions_from_Animal_Waste.aspx). At this time, the federal EPA has not developed a final model for the producer to use however, a draft methodology is available and several universities have developed models that can be used by livestock operations to determine if they need to report. For more information contact Trish Kindt at 1-800-433-2288.

Emergency Power Generator - The department has observed that emergency power generators have been installed at similar sized operations. If an emergency power generator will be installed at your operation it may require that you obtain an air quality permit. Please contact Earl Berg with the department's Air Quality Program at (605) 773-4051, to determine whether an air quality permit is required. If an air quality permit is required, you must have that permit prior to using the generator.