



DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES

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

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

March 5, 2019

Edward Kavanagh  
KC Dairies, LLP  
48612 212<sup>th</sup> Street  
Elkton, SD 57026-6716

RE: KC Dairies, LLP 2017 Permit Application and Proposed Expansion  
Plans and Specifications Review

Dear Mr. Kavanagh:

The Department of Environment and Natural Resources received four copies of your proposed expansion plans as part of your application for state permit coverage under the 2017 *General Water Pollution Control Permit for Concentrated Animal Feeding Operations* (general permit), **permit application number SDG-100031**. Your existing facility with coverage under the 2003 general permit is located in the Southwest  $\frac{1}{4}$  of Section 21, Township 110 North, Range 47 West in Brookings County, South Dakota.

Your permitted manure management system is for a housed lot feeding a maximum of 2,200 dairy cattle (1,900 mature dairy cattle and 300 dairy calves). The existing manure management system consists of three freestall barns, a maternity barn, a calving barn, a milking parlor barn, a calf barn, individual calf hutches, a commodities area, a feed storage trench silo, a solid manure stockpiling site, a sand settling lane, a concrete sand stacking pad, piping, diversion dikes or channels, three holding ponds, and 4.49 acres of drainage area. The solid manure stockpiling site is designed for 270 days of solids storage capacity. The holding pond system meets the requirements of the permit and has at least 270 days of liquid storage capacity.

Proposed modifications to your system include increasing the calf population from 300-head to 600-head, designating new calf hutch areas, and converting an existing building into calf housing. The existing building will be modified to include concrete containment walls around the perimeter of the building and a compacted clay liner for the floor. There will not be any permanent manure storage volume accounted for in the building. All manure generated by the additional calves will be handled as a solid and will be stored on the existing solid manure stacking pad.

### **State Permit Application**

Your submittal includes an application for state permit coverage under the 2017 *General Water Pollution Control Permit for Concentrated Animal Feeding Operations*. The submitted documents include a new Certification of Applicant Form, a new Notice of Intent Form, documents identifying the officers, shareholders, and those with signatory authority for the partnership, a new Operation and Maintenance Guideline, an evaluation of the holding ponds using the Soil, Plant, Air, and Water (SPAW) model with 100 years of climatic data showing the holding ponds are designed to not discharge, and an updated nutrient management plan (NMP). Your facility will continue to have permit coverage under the 2003 general permit until permit coverage is issued to you under the 2017 state general permit.

We have reviewed and hereby conditionally approve the plans and specifications for the calf barn conversion and increase in population. This approval expires on March 5, 2021, unless construction to convert the existing building to a calf barn has been started by that date. Once construction has commenced, you will have three years to complete construction and submit a Notice of Completion. If construction is not completed within the three year timeframe this approval will expire. Two copies of the approved plans and specifications are being retained for our files and requirements you must implement are listed on the attached pages.

If any deviations are required from the approved plans, as-built plans will be required. A complete set of as-built plans will be required if any major deviations result. If you plan to make any of the following modifications to your approved permit application prior to obtaining permit coverage, you will need to start the permitting process over which will require a new public notice. These modifications include: a change to the location of a process wastewater containment structure where additional soil borings are needed; a change to the type of manure or process wastewater storage structure; an increase in the amount of manure or process wastewater generated; a decrease in the manure or process wastewater storage volume in the manure containment system; or a modification to the nutrient management plan that results in a change in crop rotation or an increase in the land application acres.

Upon completion of construction, the enclosed Notice of Completion must be returned to the department. You cannot expand your permitted animal population or populate the calf barn until 2017 permit coverage is issued. **Once the Notice of Completion has been received and a satisfactory construction inspection has been conducted, the department will issue an amended Certificate of Compliance and coverage under the 2017 state 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 covers works of sanitary significance and does not cover items such as quality of material, structural soundness, or electrical and mechanical design features. Approval of the

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plans and specifications does not in any way release the applicant from the responsibility that the project will be an operable facility when construction is completed.

If you have any questions regarding the content of this letter, please feel free to contact Neal Konda, Feedlot Permit Program at (605) 773-3351. Thank you for your cooperation.

Sincerely,



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

cc: Brian Friedrichsen, PE, DEC  
Kevin Banken, Centrol Crop Consulting, 333 Marian Avenue, Brookings, SD 57006  
Brookings County Commissioners  
Lincoln County Feedlot Officer, P.O. Box 66, Ivanhoe, MN 56142  
MPCA Marshall Office, 1420 East College Drive, Suite 900, Marshall, MN 56258  
Kayla Fawcett, SD DENR Ground Water Quality Program

Enclosures: Construction Schedule Postcard  
Notice of Completion Form

## REQUIREMENTS

The following requirements must be implemented before we will issue an amended Certificate of Compliance and coverage under the 2017 state general permit. Failure to implement these requirements will invalidate this approval.

### **State 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. Notice of Intent**

Please update item 10 of the Notice of Intent form to include only the available acres in South Dakota. **The department will not issue an amended Certificate of Compliance until the updated Notice of Intent is received.**

#### **2. Environmental Training**

An environmental training certificate for Jared Gustafson was submitted with your application. **Confirmation that Jared Gustafson is your authorized representative who is responsible for the daily, weekly, and annual items necessary for maintaining permit compliance must be submitted to the department.** Please see section 3.6, beginning on page 43 of the general permit, for designating an authorized representative.

#### **2. Ground Water Monitoring**

A previous review of your system found that based on the system design, soil boring logs, and other published reports and information, your system is required to conduct ground water monitoring. For information concerning ground water monitoring requirements, please contact Kayla Fawcett at (605) 773-3296.

#### **3. 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 manure management system. If any of the dates change from the ones submitted on the postcard, please notify us at (605) 773-3351 and ask for Neal Konda.

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 construction, you need to contact the United States Corps of Engineers at (605) 224-8531 prior to construction.

## REQUIREMENTS CONTINUED

**Notice of Completion** - The Notice of Completion form must be completed by your engineer and returned to the department when construction is complete. The department cannot issue you an amended Certificate of Compliance and coverage under the 2017 state general permit until we receive a Notice of Completion. **You cannot expand your permitted animal population or populate the calf barn until 2017 permit coverage is issued.**

### 4. Initial Nutrient Management Plan (NMP)

Your submitted NMP indicates that manure and wastewater will be applied in the spring, summer, and fall, and that the methods of manure application will include injection, sprinkling with and without incorporation, and broadcast with and without incorporation. If solid manure or process wastewater is applied to fields other than cropped fields, grass, alfalfa, pasture land, or no-till cropland, liquid manure and process wastewater must be incorporated within 24 hours and solid or semi-solid manure must be incorporated within 5 days. Additional requirements pertaining to your NMP are listed on the following pages.

**An updated field list will be provided when permit coverage is granted under the 2017 state general permit. Until that time, you may continue to use your currently approved NMP for the land application of manure and wastewater from your operation in compliance with your coverage under the 2003 general permit.** Additional items that still need to be submitted for your new NMP and those that will apply to your new NMP when permit coverage is granted under the 2017 state general permit are addressed below.

#### A. Endangered Species Action Plan

An Endangered Species Action Plan was included with your NMP and the plan includes best management practices to follow when manure or process wastewater are land applied to fields that are within  $\frac{1}{4}$  mile of a stream where Topeka shiners have been observed or have potentially occupied according to the U.S. Fish and Wildlife Service. Based on your submitted NMP, a portion of the fields listed on lines 4, 11, 27, 33, and 34 are within  $\frac{1}{4}$  mile of a stream where Topeka shiners have been observed or have potentially occupied. You need to review your Endangered Species Action Plan prior to land applying to any of these fields.

#### B. Manure Application Agreements

Based on land ownership information obtained from Brookings County, the manure application agreements submitted for the fields listed on lines 4, 5, 15, 22, 23, 24, and 33 of your submitted NMP are not signed by the legal landowner. For fields where the owner is an LLC, trust, or other legal entity, you must provide information showing the signatory has the authority to sign on behalf of the entity. Landowner information for Brookings County is available through an online mapping program at

## REQUIREMENTS CONTINUED

<https://beacon.schneidercorp.com/?site=BrookingsCountySD>. Please submit application agreements for the fields above for review and approval. **You cannot apply manure or wastewater to any fields that are not listed in your approved NMP.**

### C. Fields in Other Nutrient Management Plans

Department records indicate the field listed on line 34 of the submitted NMP is currently in the NMP for Kramer Farms. This field will need to be removed from the Kramer Farms NMP before it can be added to your NMP.

### D. Annual Soil Testing

Annual soil samples from 0 to 2 feet are required on all manure land application fields prior to manure application. The fields identified as being located over a shallow aquifer are shaded in Table 1 and have additional soil testing requirements. For these fields, soil tests are required from zero to two feet **and** two to four feet prior to manure application.

For fields that require additional soil testing from 2 to 4 feet, you have the option to either conduct the initial 0 to 2-foot and the 2 to 4-foot soil test prior to land application or the alternative option to conduct the initial 0 to 2-foot soil test prior to land application and a second 0 to 2-foot soil test within four weeks of harvesting the crop. Please refer to section 1.4.4.3., beginning on page 35 of the 2017 general permit, for the annual nutrient management requirements. **You must notify the department in writing if you plan to use the alternative post-harvest soil sampling option instead of the 2 to 4-foot soil sampling requirement.**

**If you have not elected to conduct the alternative post-harvest soil sampling and the department determines you are not conducting the required 2 to 4 foot soil sampling prior to manure application, you will be required to conduct the alternative post-harvest soil sampling on all fields requiring the additional 2 to 4 foot soil sampling and no longer have the option of taking the additional 2 to 4-foot soil samples prior to land application.**

### E. Approved Land Application Fields

The fields listed in Table 1 below are approved for the land application of manure or process wastewater. **Please continue to utilize your NMP approved under your 2003 general permit until permit coverage is issued under the 2017 general permit. Before manure or wastewater can be applied to these fields, you must obtain a current soil test and use the table on page 34 of the 2017 general permit to determine whether the field fits into a nitrogen need, one-year phosphorus crop removal, five-year phosphorus crop removal, or no application category based on the current phosphorus level of the field and the predicted annual erosion. Please**

**REQUIREMENTS CONTINUED**

refer to the table on page 34 and the annual nutrient management requirements beginning on page 35 of the 2017 general permit prior to the land application of manure to determine the proper procedure for calculating the appropriate application rate for each specific field.

**Table 1: KC Dairies, LLP– Approved Land Application Fields**

Line #	County	Legal Description	Total Acres	Available Acres	Soil Sampling Requirements	
					0-2 feet	Additional
1	Brookings	NW ¼, Section 9, T110N, R47W	142.8	139.3	Yes	No
2	Brookings	S ½, Section 9, T110N, R47W	305.1	290.1	Yes	No
3	Brookings	NW ¼, Section 15, T110N, R47W	145.1	137.1	Yes	No
6	Brookings	NE ¼, Section 20, T110N, R47W	128.9	127.9	Yes	No
7	Brookings	NW ¼, Section 21, T110N, R47W	74.8	73.8	Yes	No
8	Brookings	NE ¼, Section 21, T110N, R47W	209.4	203.4	Yes	No
9	Brookings	SW ¼, Section 21, T110N, R47W	73.9	73.9	Yes	No
10	Brookings	SE ¼, Section 21, T110N, R47W	129.8	118.8	Yes	No
11	Brookings	N ½, Section 27, T110N, R47W	140.1	124.1	Yes	No
13	Brookings	NW ¼, Section 28, T110N, R47W	117.7	110.7	Yes	No
14	Brookings	SW ¼, Section 28, T110N, R47W	109.5	109.5	Yes	No
16	Brookings	SE ¼, Section 28, T110N, R47W	78.0	78.0	Yes	No
17	Brookings	NW ¼, Section 33, T110N, R47W	127.4	127.4	Yes	Yes
18	Brookings	NE ¼, Section 33, T110N, R47W	132.6	124.6	Yes	Yes
19	Brookings	SE ¼, Section 33, T110N, R47W	111.4	111.4	Yes	Yes
21	Brookings	SW ¼, Section 34, T110N, R47W	140.2	130.2	Yes	No
24	Brookings	W ½, Section 3, T109N, R47W	363.2	345.2	Yes	Yes
32	Brookings	S ½, Section 16, T110N, R47W	290.5	271.5	Yes	No
35	Brookings	E ½, Section 29, T110N, R47W	431.9	401.9	Yes	No
<b>Total Available Acres</b>				<b>3,098.8</b>		

Please note in your initial 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.

The submitted maps do not indicate any setbacks required by the county; please ensure the field maps indicate all DENR and County required setbacks. If modifications to the maps are required, please submit revisions to the department for review and approval.

**A. Additional Land Application Sites**

Table 2 below lists the landowners of fields located in other states, the county, and number of acres available for land application. You are required to provide each landowner with the manure or process wastewater results for total nitrogen, inorganic nitrogen, and total phosphorus on an annual basis when manure is transferred to these individuals. You are required to maintain records documenting the amount of manure

**REQUIREMENTS CONTINUED**

transferred, the nutrient content of the manure, and the date of the transfer. You also need to contact the Lincoln County Feedlot Officer and the MPCA for information regarding Minnesota’s requirements pertaining to the land application of manure.

**Table 2: Out of State Landowners**

<b>Owner</b>	<b>County and State</b>	<b>Approximate Acreage</b>
Allan Rasmussen Trust	Lincoln, MN	242
Randall Bushman	Lincoln, MN	406
Alice Kinner Trust	Lincoln, MN	156
A&R Weber Family, LLC	Lincoln, MN	445
Lance Weber	Lincoln, MN	148
ENL Farms, LLP	Lincoln, MN	792
Richard Motter	Lincoln, MN	118
ARC Weber, LLC	Lincoln, MN	787
Paul Erschens Trust	Lincoln, MN	378
LerdalFamily Trust	Lincoln, MN	139
Bruce Kinner Trust	Lincoln, MN	212
Delaney Herefords, Inc.	Lincoln, MN	89

**B. Land Application to Saturated, Snow-Covered, or Frozen Soil**

The fields identified on lines 7 and 18 of your submitted NMP are designated as winter or emergency application areas. The winter application maps identify the appropriate setbacks that need to be excluded from land application when the soil is saturated, snow-covered, or frozen and land application is absolutely necessary. You should notify the department and review the winter field map prior to land applying during these soil conditions.

Incorporation to non-vegetated crop ground is required for winter application. If incorporation is not possible, winter application may only be to cropped fields, grass, alfalfa, pasture land, or no-till cropland. The general permit requires manure or process wastewater applied to non-vegetated cropland to be incorporated; liquid manure and process wastewater must be incorporated within 24 hours and solid or semi-solid manure must be incorporated within 5 days.

**C. Modification to Crop Rotation**

Your initial NMP identifies a specific crop rotation for each field and includes a list of alternative crops that may be substituted into the rotation. If for any reason an alternative crop that is not included in the list of alternative crops is planned to be grown, that



## REQUIREMENTS CONTINUED

change would be considered a major modification and would require a revised alternative crop list to be submitted to the department for review and approval.

### D. Certified Soil and Manure Testing Laboratories

As part of your annual nutrient management planning requirements, soil and manure tests must be analyzed by certified soil testing and manure testing labs. The laboratory analyzing the soil samples must participate in the **North American Proficiency Testing Programs' Proficiency Assessment Program** and the labs that are currently certified are listed on the following website: <http://www.naptprogram.org/pap/labs>. The laboratory analyzing the manure or process wastewater must be certified by the **Manure Testing Laboratory Certification Program** and the manure testing labs that are currently certified are listed on the following website: <http://www2.mda.state.mn.us/webapp/lis/manurelabs.jsp>.

### E. 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. 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.**

### F. Mobile Land Application Systems

If a mobile land application system using temporary piping will be used for the land application of liquid manure or process wastewater, the equipment must be equipped with an on-board radio controller and flow meter that can be overseen by the applicator. See Section 1.4.4.1.m. on page 30 of the 2017 general permit for more information on this requirement.

## 5. Setback Distance and Water Wells

The manure management system and the application sites must be located at least 100 feet from a private well owned by you if the top of the aquifer is 100 feet or more below the land surface, 150 feet from a private well owned by you if the top of the aquifer is less than 100 feet below the land surface, 250 feet from a private well not owned by you and 1,000 feet from any public supply well. These areas can not be included in the land application areas.

## REQUIREMENTS CONTINUED

### 6. Other Permits That will or May Be Required

Storm Water Permit - If construction will disturb more than one acre in total land area, **you must obtain a general storm water construction permit.** This permit must be obtained before you can start constructing your proposed manure management system. Information concerning this permit can be obtained by calling the Surface Water Quality Program at 1-800-737-8676. **A copy of this plan must be kept on-site during construction for review by DENR inspectors.**

Water Right Permit - Department records indicate your operation is covered under water rights permit 5822-3. Information concerning this permit can be obtained by calling Eric Gronlund at (605) 773-3352.

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 Kristen Hendricks with the department's Air Quality Program at (605) 773-3151, 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.

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.