



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

April 29, 2016

Edward Kavanagh
KC Dairy, LLP
48612 212th Street
Elkton, SD 57026

Re: KC Dairy Manure Management System
As-Built Plans Review – Calf Barn Modification

Dear Mr. Kavanagh:

The Department of Environment and Natural Resources (DENR) received four copies of as-built plans for the completed modification of the west two-thirds of an existing pole barn into calf housing for 80 dairy calves. DENR conditionally approved plans and specification that included this modification on July 8, 2014.

Your dairy operation currently has coverage under the General Water Pollution Control Permit for Concentrated Animal Feeding Operations (the general permit) for a maximum of 2,120 dairy cattle (1,900 mature dairy cattle and 220 dairy calves) (permit number SDG-0100031). The manure management system is located in the Southwest $\frac{1}{4}$ of Section 21, Township 110 North, Range 47 West, in Brookings County, South Dakota.

Your approved 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.

As-built changes for the calf barn modifications that were approved on July 8, 2014, consist of: showed the concrete stem walls constructed on three sides of the existing pole barn are 2 feet high; installed pen dividers to create four pens inside the calf barn; and installed two waterers inside the calf barn to provide water for the calves in the four pens.

We have reviewed and hereby approve the changes shown on the as-built plans. Two copies of the as-built plans are being kept for our files. Please replace the appropriate pages in your plans

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and specifications booklet with the revised pages enclosed with this letter and add any additional pages enclosed with this letter into your plans and specifications booklet.

Calf Barn Existing Concrete Floor – The submitted as-built plan sheet shows the concrete floor in the existing pole barn, two-thirds of which was converted into housing for dairy calves, was constructed using fiber reinforced concrete. In a cover letter dated March 24, 2016, your engineer states, “The floor was observed to be in good condition. Any cracks observed did not display displacement judged adequate to merit disturbance.” **To ensure the calf barn continues to be watertight, containing manure and wastewater inside the barn, you must inspect the condition of the floor during the required weekly inspection of your manure management system. If cracks develop in the concrete floor which could result in manure or wastewater leaking out of the barn, the cracks must be sealed with a suitable material so the concrete floor will be watertight.** Any repairs shall be documented in your inspection records. DENR staff will check the condition of the floor during future inspections at the dairy.

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 materials, structural soundness, or electrical and mechanical design features. Approval of the plans and specifications does not in any way release the producer 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 contact Keith Miller, Feedlot Permit Program, at (605) 882-5111. Thank you for your cooperation.

Sincerely,



Kent R. Woodmansey, PE, Engineering Manager
Feedlot Permit Program
Ph. (605) 773-3351

Enclosures

Cc: Brian Friedrichsen, PE, Dakota Environmental, Inc., PO Box 636, Huron, SD 57350
Luke Muller, FDALG, PO Box 1207, Watertown, SD 57201
Brookings County Commissioners