Statement of Basis

FACILITY:	**Wulf Cattle Depot**
CAFO NPDES PERMIT NO.:	**SD-0034606**
FACILITY CONTACT:	**Mr. Lucas Sutherland, Manager**
PHONE:	**605-823-4467**
ADDRESS:	**400 Sale Barn Road** **McLaughlin, South Dakota 57642**

Background Information

This permit is for a beef cattle feedlot located on the Standing Rock Sioux Tribe Reservation at the NE 1/4 of Section 5, Township 21 North Range 27 East, latitude 45°49.107' N and longitude 100°47.911' W in McLaughlin, South Dakota. This feedlot started background feeding in 1992 with about 160 animals. It expanded to a CAFO with over 1000 animals in 1997. The feedlot was previously known as the McLaughlin Livestock Auction then Corson County Feeders and now Wulf Cattle Depot.

The McLaughlin Livestock Auction building is still located in the NE 1/4 of Section 5, Township 21 North Range 27 East, latitude 45°48.969' N and longitude 100°48.387' W in Corson County, South Dakota. This building is adjacent and west of the Wulf Cattle Depot feedlot. However, in the spring of 2012 Wulf Cattle Depot purchased all of McLaughlin Livestock Auction (pens and building) with the intent to convert all auction pens into feedlot pens in the future.

Currently, the Wulf Cattle Depot consists of approximately 153 acres of land with approximately forty-five feeding pens, five settling basins, and four holding or retention ponds. This facility can hold up to a total of 12,400 head of background calves. These calves weigh an average of 650 pounds. Once the calves reach approximately 800 pounds, they typically will be shipped to finishing lots. However, at other times, livestock may be fed out depending on market conditions. Livestock at times may be fed out depending on market conditions.

Receiving Waters

The closest named water stream is Oak Creek. The Standing Rock Sioux Tribe Reservation classifies Oak Creek as a class II water. The creek has the following designated uses: Recreation, Aquatic life harvesting, and Agricultural. There is a dry bed drainage north of the County Road from the Wulf Cattle CAFO facility. The County Road is directly north of the facility. This drainage flows to Oak Creek which is approximately one mile northeast of the facility. Oak Creek is a tributary to the Missouri River (Lake Oahe). The Missouri River (Lake Oahe) has the following designated uses: Coldwater Permanent Fish Life Propagation Water, Commerce and Industry Waters, Domestic Water Supply Waters, Fish and Wildlife Propagation,

Recreation, and Stock Watering Waters, Immersion Recreation Waters, Irrigation Waters, and Limited Contact Recreation Waters.

The Wulf Cattle CAFO facility has constructed five new settling basins and expanded four wastewater holding ponds to collect all runoff from the feedlot. A wastewater flow diagram outlining the feedlot and the drainage areas is in Section A of the NMP. There are four separate drainage areas which include a combination of sediment basins, diversions and holding ponds. All the basins, diversions and ponds ultimately drain via gravity to Holding Pond #4. Wastewater from holding Pond #4 is pumped via a floating pump to a center pivot on Field #3 for land application.

All of the pens (and part of the parking lot) that were previously part of the McLaughlin Livestock Auction (now owned and being incorporated into the feedlot) drain to Holding Ponds # 3 or #4. The feedlot holding ponds were designed to account for this additional capacity to handle the drainage from the previous livestock auction. The holding ponds were sized approximately 6.7 percent larger to account for this area. The feedlot facility also planted about 1800 seedlings (five rows) with a drip system along the north side of the feedlot to act as a barrier between the feedlot and its neighbors.

The facility has wastewater storage capacity of 3,043,050 ft^3 (22,763,595 gallons) for manure, litter, and process wastewater generated from the animals as indicated in the NMP. According to the NMP, the facility generates approximately 1,428,971 ft^3 /year (10,688,702 gallons/year) of manure, litter and wastewater. Therefore, there is excess storage capacity in the wastewater lagoon system.

There are approximately 7,000 acres of land owned or leased by the permittee. These lands are available for applying the CAFOs manure, litter, and process wastewater.

Monitoring Data

No discharges have been reported from this facility over the past 8 years.

GENERAL STATUTORY AND REGULATORY INFORMATION

Section 301(a) of the Clean Water Act (CWA), 33 USC 1311(a), prohibits the discharge of pollutants to waters of the U.S. in the absence of authorizing permits, including NPDES permits. The CWA Section 402, 33 USC 1342, authorizes EPA (or EPA-approved States) to issue NPDES permits allowing such discharges on condition that they in part will comply with requirements implementing CWA Sections 301, 304, and 401 [33 USC 1311, 1314, and 1341].

Among those requirements are effluent limitations reflecting levels of technological capability, water quality standards, and other more stringent requirements States may adopt. Violation of a condition contained in this permit, is a violation of the CWA and subjects the operator of the permitted facility to the penalties specified in Section 309 of the Act.

Permit Expiration

In accordance with 40 CFR Part 122.46(a), this permit has a term of five years from the effective date.

RATIONALE FOR EFFLUENT LIMITATIONS AND STANDARDS

A. Effluent Limitations

Section 301 of the CWA prohibits the discharge of pollutants by any point source into waters of the U.S. except in accordance with a permit. It also requires that dischargers comply with effluent limitations necessary to meet water quality standards. The NPDES permit regulations at 40 CFR 122.44(a) and (d) implement Section 301 by requiring that each NPDES permit issued under Section 402 include conditions that meet technology-based effluent limitations and standards, as well as water quality standards.

1. Technology-based Effluent Limitations

Large CAFOs are subject to the effluent guidelines found at 40 CFR Part 412.

Pursuant to the Clean Water Act (the "Act") Section 402(a)(2) [40 CFR 122.44(k)(3)], best management practices (BMPs) are being proposed in the permit. These practices are reasonably necessary either to achieve effluent limitations or to carry out the Act's goals of eliminating the discharge of pollutants as much as practicable and to maintain water quality

a. Technology-based Effluent Limitations and Standards – Production Area

   There shall be **no discharge** of manure, litter, or process wastewater pollutants into waters of the United States from the production area except as provided below: (In accordance with 40 CFR 412.31 and 412.43)

   The design storage volume must reflect manure, wastewater, and other wastes accumulated during the storage period; normal precipitation less evaporation on the surface area during the entire storage period; normal runoff from the facility's drainage area during the storage period; 25-year, 24-hour precipitation on the surface (at the required design storage volume level) of the facility; 25-year, 24-hour runoff from the facility's drainage area; residual solids after liquids have been removed; necessary freeboard; and, in the case of treatment lagoons, a minimum treatment volume necessary to allow anaerobic treatment to occur.
   [40 CFR 122.42(e)(1)(i)]

b. The additional measures and records. In accordance with 40 CFR 412.37(a) and (b).

2. Additional Measures – Applicable to the Production Area

Visual inspections of the production area including: [412.37(a)(1)]

a. Weekly inspections of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water to the wastewater and manure storage and containment structures. [40 CFR 412.37(a)(1)(i)]

b. Daily inspections of all water lines, including drinking water and cooling water lines. [40 CFR 412.37(a)(1)(ii)

c. Weekly inspections of the manure, litter, and process wastewater impoundments noting the level as indicated by the depth marker installed in accordance with part d below, and 40 CFR 412.37(a)(2). [40 CFR 412.37(a)(1)(iii)]

d. Installation of a depth marker in all open surface liquid impoundments which clearly indicates the minimum capacity necessary to contain the runoff and direct precipitation of the 25-year, 24-hour rainfall event. [40 CFR 412.37(a)(2)]

e. Correction of any deficiencies that are identified as a result of visual inspections as soon as possible. [40 CFR 412.37(a)(3)]

f. No disposal of animal mortalities in any liquid manure or process wastewater systems and handling of animal mortalities in such a way as to prevent discharge of pollutants to surface water. [40 CFR 412.37(a)(4)]

g. Complete records of maintenance for the production area, in accordance with 40 CFR 412.37(b). Records must be maintained on-site at the permitted CAFO for five years from the date they are created and must include the records identified in the Operation and Maintenance section of Table IV-A of the permit.

3. Water Quality-based Effluent Limitations and Standards – Production Area

In those cases where technology-based effluent limitations are not sufficient to meet water quality standards, the permitting authority must develop more stringent water quality-based effluent limitations on a site-specific basis. NPDES permits for CAFOs may include BMPs as water quality-based effluent limitations or use BMPs that are reasonably necessary to meet water quality-based effluent limitations [40 CFR 122.44(k)].

4. Technology-based Effluent Limitations and Standards – Land Application Areas under the Control of the CAFO Owner/Operator

The CAFO must develop and implement a nutrient management plan. [40 CFR 412.4(c)(1)]

a. Develop and implement a nutrient management plan that is based on a field-specific assessment of the potential for nitrogen and phosphorus transport from the field. [40 CFR 412(c)(1)]

b. Address the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus movement to surface waters. [40 CFR 412(c)(1)]

c. Determine application rates for manure, litter, and process wastewater that minimize phosphorus and nitrogen transport from the field to surface waters in accordance with the technical standards for nutrient management established by the Director. [40 CFR 412(c)(2)]

d. In addition to the above technology-based effluent limitations for the land application areas, EPA has established BPJ requirements for identification of site specific conservation practices to control runoff of pollutants to waters of the U.S. [40 CFR 122.42(e)(1)(vi)]

e. Establishment of protocols to land apply manure, litter, and process wastewater in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter, or process wastewater. [40 CFR 122.42(e)(1)(vii)]

f. Analyze manure a minimum of once annually for nitrogen and phosphorus content and soil a minimum of once every five years for phosphorus content. [40 CFR 412.4(c)(3)]

g. Periodically inspect for leaks equipment used for land application of manure, litter, or process wastewater. [40 CFR 412.4(c)(4)

h. Do not apply manure, litter, or process wastewater closer than 100 feet to any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads, or other conduits to surface waters. As a compliance alternative, the CAFO may substitute the 100-foot setback with a 35-foot wide vegetated buffer where applications of manure, litter, or process wastewater are prohibited. [40 CFR 412.4(c)(5) and 40 CFR 412.4(c)(5)(i)]

i. Complete on-site records including the site specific NMP must be maintained to document implementation of all required land application practices. [40 CFR 412.37(b)]

5. Other Limitations for Land Application Areas under the Control of the CAFO Owner/Operator

a. Additional BMPs to control discharges from land application areas.
[Based on Best Professional Judgment]

b. Prohibitions

(i) There shall be no discharge of manure, litter or process wastewater to a water of the United States from a CAFO as a result of the application of manure, litter or process

wastewater to land areas under the control of the CAFO, except where it is an agricultural storm water discharge. [40 CFR 122.23(e)]

c. Water Quality-Based Effluent Limitations.
Discharges from CAFO land application areas, except where it is an agricultural storm water discharge, are subject to NPDES requirements, including water quality-based effluent limitations. Federal regulations [40 CFR 122.44(d)] require permit limitations to control all pollutants which may be discharged at a level with will cause, have the reasonable potential to cause, or contribute to an excursion above water quality standard. In most instances, a CAFO that meets technology-based permit limits requiring manure to be applied at appropriate agronomic rates will eliminate all or most dry weather discharges. However, if such discharges remain, the Permitting Authority must determine the need for additional water quality-based effluent limitations to meet applicable water quality standards based on the circumstances of each particular case (see the Preamble to the Final Rule, 73 FR 70,418 (November 20, 2008)).

This permit prohibits all dry weather discharge from the land application area. This includes, but is not limited to, the dry weather discharge of irrigation water not associated with nutrient application on fields where manure was previously applied.

6. Effluent Limitations - Other Discharges

a. Other production area discharges

Permit limitations are based on best professional judgment (BPJ) when national effluent limitations guidelines that apply to the appropriate category, or to the particular process involved, have not been issued. EPA can use BPJ to develop special permit conditions to address specific discharges at CAFOs, such as washdown of equipment that has been in contact with manure, discharges of fuel, and pollutants (i.e., manure and feed) which have fallen to the ground immediately downwind from confinement building exhaust ducts and ventilation fans and are carried by storm water runoff to waters of the U.S. (see Section 4.1.1 of EPA's December 31, 2003, NPDES Permit Writers' Guidance Manual and Example NPDES Permit for CAFOs). Discharges from CAFOs, including process wastewater discharges from outside the production area, non-process wastewater discharges, and storm water discharges not addressed under the ELG, except where they are considered an agricultural storm water discharge, are subject to NPDES requirements, including water quality-based effluent limitations.
limitations.

B. Other Legal Requirements

No condition of this permit releases the permittee from any responsibility or requirements under other statutes or regulations, Federal, Indian Tribe or Local. [40 CFR Parts 122.1(f) and 122.49]

III.SPECIAL CONDITIONS

A. Nutrient Management Plan

Schedule. The completed NMP must be submitted to the Permit Authority with the permit application for CAFOs seeking coverage under this permit. The permittee shall implement its NMP upon authorization under this permit. [40 CFR 122.23(h)]

1. NMP Terms and Conditions

The permittee must develop, submit with permit application, and upon authorization implement a site specific Nutrient Management Plan (NMP). The NMP must specifically identify and describe the practices that will be implemented to assure compliance with the effluent limitations and special conditions in this CAFO permit. The NMP must be developed in accordance with the SD NRCS Conservation Practice Standard Code 590 (Nutrient Management). As provided in 40 CFR 123.36, these technical standards must be consistent with 412.4(c)(2), which in part provides that such standards must operate to minimize the transport of nutrients to surface waters. The nutrient management plan accomplishes this primarily by restricting the quantity of nutrients that can be land applied and matching that quantity with the nutrient needs of the crops being grown on the fields used for such land application. [40 CFR 122.23(h)]

Upon receipt of the NMP, the Director will review the NMP. The Director can request additional information if needed. The Director will use the NMP to identify site-specific permit terms, which must be incorporated as terms and conditions of the permit. [40 CFR 122.23(h)]

Once the permit application and NMP are complete and have been reviewed by the Director, the Director will notify the public make available for public review and comment of the proposed permit and materials submitted by the CAFO, including the CAFO's NMP, and the terms of the NMP identified by the Director to be incorporated into the permit, as determined by the Director, at the EPA Region 8 internet site (http://www.epa.gov/region8/water/cafo/). The notice will also provide the opportunity for the request for a public hearing on the proposed permit and NMP in accordance with 40 CFR 124.11 and 12. The public is provided 30 days to comment and request a hearing on the proposed terms of the NMP to be incorporated into the permit. The Director will respond to significant comments and can revise the NMP or terms of the permit if necessary. [40 CFR 122.23(h)]

The permit specifies that the NMP must, at a minimum, include practices and procedures necessary to implement the applicable effluent limitations and standards. In addition, the NMP must meet nine minimum measures required under 40 CFR 122.42(e)(1)(i-ix), and specified in this permit. These requirements include the following:

a. Ensure adequate storage of manure, litter, and process wastewater, including procedures to ensure proper operation and maintenance of the storage facilities. [40 CFR 122.42(e)(1)(i)]

b. Ensure proper management of mortalities (i.e., dead animals) to ensure that they are not disposed of in a liquid manure, storm water, or process wastewater storage or treatment system that is not specifically designed to treat animal mortalities. [40 CFR 122.42(e)(1)(ii)]

c. Ensure that clean water is diverted, as appropriate, from the production area. [40 CFR 122.42(e)(1)(iii)

d. Prevent the direct contact of animals confined or stabled at the facility with waters of the United States. [40 CFR 122.23(1)(iv)]

e. Ensure that chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals or contaminants. [40 CFR 122.23(1)(v)]

f. Identify appropriate site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the United States and specifically, to minimize the runoff of nitrogen and phosphorus. [40 CFR 122.23(1)(vi)]

g. Identify protocols for appropriate testing of manure, litter, process wastewater, and soil. [40 CFR 122.23(1)(vii)]

h. Establish protocols to land apply manure, litter, or process wastewater in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter, or process wastewater. [40 CFR 122.23(1)(viii)]

Application rates will be expressed in NMPs consistent with the approach described below:

Narrative Rate Approach. An approach that expresses rates of application as narrative rate of application that results in the amount, in tons or gallons, of manure, litter, and process wastewater to be land applied according to the following specifications:

(A) The terms include maximum amounts of nitrogen and phosphorus derived from all sources of nutrients, for each crop identified in the nutrient management plan, in chemical forms determined to be acceptable to the Director, in pounds per acre, for each field, and certain factors necessary to determine such amounts. At a minimum, the factors that are terms must include: the outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field; the crops to be planted in each field or any other uses such as pasture or fallow fields (including alternative crops identified in accordance with paragraph (ii)(B) of this section); the realistic yield goal for each crop or use identified for each field, and the nitrogen and phosphorus recommendations from sources specified by the Director for each crop or use identified for each field. In addition, the terms include the methodology by which the nutrient management plan accounts for the following factors when calculating the amounts of manure,

litter, and process wastewater to be land applied: results of soil tests conducted in accordance with protocols identified in the nutrient management plan, credits for all nitrogen in the field that will be plant available; the amount of nitrogen and phosphorus in the manure, litter and process wastewater to be applied; consideration of multi-year phosphorus application; accounting for all other additions of plant available nitrogen and phosphorus to the field, the form and source of manure, litter, and process wastewater; the timing and method of land application; and volatilization of nitrogen and mineralization of organic nitrogen.

(B) The terms of the nutrient management plan include alternative crops identified in the CAFO's nutrient management plan that are not in the planned rotation. Where a CAFO includes alternative crops in its nutrient management plan, the crops must be listed by field, in addition to the crops identified in the planned crop rotation for that field and the nutrient management plan must include realistic crop yield goals and the nitrogen and phosphorus recommendations from sources specified by the Director for each crop. Maximum amounts of nitrogen and phosphorus from all sources of nutrients and the amounts of manure, litter, and process wastewater to be applied must be determined in accordance with the methodology described in (ii)(A) of this section.

(C) For CAFOs using this approach the following projections must be included in the nutrient management plan submitted to the Director, but are not terms of the nutrient management plan: the CAFO's planned crop rotations for each field for the period of permit coverage, the projected amount of manure, litter, or process wastewater to be applied; projected credits for all nitrogen in the field that will be plant available; consideration of multi-year phosphorus application: accounting for all other additions of plant available nitrogen and phosphorus to the field; and the predicted form, source, and method of application of manure, litter, and process wastewater for each crop. Timing of application for each field, insofar as it concerns the calculation of rates of application, is not a term of the nutrient management plan.

(D) CAFOs that use this approach must calculate maximum amounts of manure, litter, and process wastewater to be land applied at least once each year using the methodology required in paragraph (ii)(A) of this section before land applying manure, litter, and process wastewater and must rely on the following data;

(1) a field-specific determination of soil levels of nitrogen and phosphorus, including, for nitrogen, a concurrent determination of nitrogen that will be plant available consistent with the methodology required in paragraph (ii)(A) of this section, and for phosphorus, the result of the most recent soil test conducted in accordance with soil testing requirements approved by the Director; and

(2) the results of most recent representative manure, litter, and process wastewater tests for nitrogen and phosphorus taken within 12 months of the date of land application, in order to determine the amount of nitrogen and phosphorus in the manure, litter., and process wastewater to be applied. [122.42(e)(5)(ii)

i. Identify and maintain all records necessary to document the development and implementation of the NMP and compliance with the permit. [40 CFR 122.23(1)(ix)]

2. Signature. The NMP shall be signed by the owner/operator or other signatory authority in accordance with Part VI.E (Signatory Requirements) of this permit. [40 CFR 122.41(k)]

3. A current copy of the NMP shall be kept on-site at the permitted facility in accordance with Part IV.C of this permit and provided to the permitting authority upon request. [40 CFR 412.37(c)]

4. Changes to the NMP

a. The permit recognizes that a CAFO owner or operator may need to make changes to its NMP. When the permittee makes changes to the CAFO's NMP previously submitted to the Director, the CAFO owner or operator must provide the Director with the most current version of the CAFO's NMP and identify changes from the previous version. [40 CFR 122.42(e)(6)(i)]

b. The Director will review the revised NMP. If the Director determines that the changes to the NMP require revision of the terms of the NMP incorporated into the permit issued to the CAFO, the Director must then determine whether such changes are substantial. [40 CFR 122.42(e)(6)(ii)] Substantial changes to the terms of a NMP incorporated as terms and conditions of a permit include, but are not limited to: [40 CFR 122.42(e)(6)(iii)]

(i) Addition of new land application areas not previously included in the CAFO's NMP, except that if the added land application area is covered by the terms of a NMP incorporated into an existing NPDES permit and the permittee complies with such terms when applying manure, litter, and process wastewater to the added land; [40 CFR 122.42(e)(6)(iii)(A)]

(ii) For NMPs using the Narrative Rate Approach, changes to the maximum amounts of nitrogen and phosphorus derived from all sources for each crop; [40 CFR 122.42(e)(6)(iii)(B)]

(iii) Addition of any crop or other uses not included in the terms of the CAFO's NMP; and [40 CFR 122.42(e)(6)(iii)(C)]

(iv) Changes to site specific components of the CAFO's NMP, where such changes are likely to increase the risk of nitrogen and phosphorus transport to waters of the U.S. [40 CFR 122.42(e)(6)(iii)(D)]

c. If the changes to the terms of the NMP are not substantial, the Director will include the revised NMP in the permit record, revise the terms of the permit based on the site specific NMP, and notify the permittee and the public of any changes to the terms of the permit based on revisions to the NMP. [40 CFR 122.42(e)(6)(ii)(A)]

d. If the Director determines that the changes to the terms of the NMP are substantial, the Director will notify the public, make the proposed changes and make the information submitted by the CAFO owner or operator available for public review and comment, and respond to all significant comments received during the comment period. The Director may require the permittee to further revise the NMP, if necessary. Once the Director incorporates the revised terms of the NMP into the permit, the Director will notify the permittee of the revised terms and conditions of the permit. [40 CFR 122.42(e)(6)(ii)(B)]

B. Facility Closure

Abandoned or improperly closed CAFOs pose a pollution threat to surface water and groundwater that can be significant for large facilities and increases due to a lack of proper maintenance and management.

This CAFO permit includes specific closure requirements for lagoons and other surface impoundments, as well as for other manure, litter and process wastewater storage and handling facilities. Under this permit, no such facilities may be abandoned and each must be properly closed as promptly as practicable upon ceasing operation. In addition, any lagoon or other earthen or synthetic lined basin that is not in use for a period of twelve consecutive months must be properly closed unless the facility is financially viable, intends to resume use of the structure at a later date, and either: (1) maintains the structure as though it were actively in use, to prevent compromise of structural integrity; or (2) removes manure and wastewater to a depth of one foot or less and refills the structure with clean water to preserve the integrity of the synthetic or earthen liner. In either case, the permittee must notify EPA of the action taken, and must conduct routine inspections, maintenance, and record keeping as though the structure were in use. Prior to restoration of use of the structure, the permittee shall notify EPA and provide the opportunity for inspection.

All closure of lagoons and other earthen or synthetic lined basins must be consistent with SD NRCS Conservation Practice Standard Code 360 (Closure of Waste Impoundments). Consistent with this standard the permittee must remove all waste materials to the maximum extent practicable and dispose of them in accordance with the permittee's nutrient management plan, unless otherwise authorized by EPA.

Closure of all other manure, litter, or process wastewater storage and handling structures must occur as promptly as practicable after the permittee has ceased to operate, or, if the permittee has not ceased to operate, within 12 months after the date on which the use of the structure ceased. To close a manure, litter, or process wastewater storage and handling structure, the permittee must remove all manure, litter, or process wastewater and dispose of it in accordance with the permittee's nutrient management plan, or document its transfer from the permitted facility in accordance with off-site transfer requirements specified in this permit, unless otherwise authorized by EPA. [40 CFR 122.23(h)]

C. Requirements for the Transfer of Manure, Litter, and Process Wastewater to Other Persons

Under this CAFO permit, where CAFO-generated manure, litter, or process wastewater is sold or given away the permittee must comply with specific requirements that document the transaction and promote proper management. These include the following conditions:

a. Maintain records showing the date and amount of manure, litter, and/or process wastewater that leaves the permitted operation;

b. Record the name and address of the recipient;

c. Provide the recipient(s) with representative information on the nutrient content of the manure, litter, and/or process wastewater; and

d. These records must be retained on-site, for a period of five years, and be submitted to the permitting authority upon request. [122.42(e)(3)]

This CAFO permit does not establish requirements for off-site management of CAFO generated manure, litter, or process wastewater. However, the Director can use the documentation specified above to ensure proper management of such materials as appropriate.

IV. DISCHARGE MONITORING AND NOTIFICATION REQUIREMENTS

A. Notification of Discharges Resulting from Manure, Litter, and Process Wastewater Storage, Handling, On-site Transport and Application

This permit provides that in the event of a discharge of pollutants to a water of the United States, the permittee is required to make immediate oral notification within 24-hours to the EPA Region 8, Site Assessment/Emergency Response Program at (303) 293-1788 and notify EPA in writing within five (5) working days of the discharge from the facility. In addition, the permittee must keep a copy of the notification submitted to EPA together with the other records required by this permit. The discharge notification must include: 1) A description of the discharge and its cause, including a description of the flow path to the receiving water body and an estimate of the flow and volume discharged; and 2) The period of non-compliance, including exact dates and times, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate and prevent recurrence of the discharge. This reporting requirement is a standard permit condition under 40 CFR 122.41(l)(6). Note that runoff that meets the criteria of the agricultural stormwater exemption does not constitute a point source discharge.

B. Monitoring Requirements for All Discharges from Retention Structures

This CAFO permit provides that in the event of any overflow or other discharge of pollutants from a manure and/or wastewater storage or retention structure, whether or not authorized by this permit, all discharges must be sampled and analyzed, and an estimate of the volume of the release and the date and time must be recorded. [40 CFR 122.41(j)]

Samples must, at a minimum, be analyzed for the following parameters: total nitrogen, ammonia nitrogen phosphorus, fecal coliform, five-day biochemical oxygen demand (BOD_5), total suspended solids, pH, and temperature. The discharge must be analyzed in accordance with approved EPA methods for water analysis listed in 40 CFR Part 136. [40 CFR 122.41]

If conditions are not safe for sampling, the permittee must provide documentation of why samples could not be collected and analyzed. For example, the permittee may be unable to collect samples during dangerous weather conditions (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.). However, once dangerous conditions have passed, the permittee shall collect a sample from the retention structure (pond or lagoon) from which the discharge occurred. [40 CFR 122.41]

C. General Inspection, Monitoring, and Record keeping Requirements

Under this permit, the permittee shall inspect, monitor, and record the results of such inspection and monitoring in accordance with Table IV–A:

Table IV-A NPDES Large CAFO Permit Record Keeping Requirements		
Parameter	**Units**	**Frequency**
Permit and Nutrient Management Plan ***(Note: Required by the NPDES CAFO Regulation – applicable to all CAFOs)***		
The CAFO must maintain on-site a copy of the current NPDES permit.	N/A	Maintain at all times
The CAFO must maintain on-site a current site specific NMP that reflects existing operational characteristics. The operation must also maintain on-site all necessary records to document that the NMP is being properly implemented with respect to manure and wastewater generation, storage and handling, and land application. In addition records must be maintained that the development and implementation of the NMP is in accordance with the minimum practices defined in 40 CFR 122.42(e).	N/A	Maintain at all times
Soil and Manure/Wastewater Nutrient Analysis ***(Note: Required by the CAFO ELG – applicable to Large CAFOs)***		
Analysis of manure, litter, and process wastewater to determine nitrogen and phosphorus content.[1]	ppm Pounds/ton	At least annually after initial sampling
Analysis of soil in all fields where land application activities are conducted to determine phosphorus content.[1]	ppm	At least once every 5 years after initial sampling
Operation and Maintenance ***(Note: Required by the CAFO ELG – applicable to Large CAFOs)***		

Table IV-A NPDES Large CAFO Permit Record Keeping Requirements		
Parameter	**Units**	**Frequency**
Visual inspection of all water lines	N/A	Daily[2]
Documentation of depth of manure and process wastewater in all liquid impoundments	Feet	Weekly
Documentation of all corrective actions taken. Deficiencies not corrected within 30 days must be accompanied by an explanation of the factors preventing immediate correction.	N/A	As necessary
Documentation of animal mortality handling practices	N/A	As necessary
Design documentation for all manure, litter, and wastewater storage structures including the following information:		
• Volume for solids accumulation	Cubic yards/gallons	Once in the permit term unless revised
• Design treatment volume	Cubic yards/gallons	
• Total design storage volume[3]	Cubic yards/gallons	
• Days of storage capacity	Days	
Documentation of all overflows from all manure and wastewater storage structures including: ***(Note: Required by the NPDES Regulation – applicable to all CAFOs)***		
• Date and time of overflow	Month/day/year	Per event
• Estimated volume of overflow	Total gallons	Per event
• Analysis of overflow (as required by the permitting authority)	TBD	Per event
Land Application ***(Note: Required by the CAFO ELG – applicable to Large CAFOs)***		
For each application event where manure, litter, or process wastewater is applied, documentation of the following by field:		
• Date of application	Month/day/year	Daily
• Method of application	N/A	Daily
• Weather conditions at the time of application and for 24 hours prior to and following application	N/A	Daily
• Total amount of nitrogen and phosphorus applied[4]	Pounds/acre	Daily
Documentation of the crop and expected yield for each field	Bushel/acre	Seasonally
Documentation of the actual crop planted and actual yield for each field		

Documentation of test methods and sampling protocols used to sample and analyze manure, litter, and wastewater and soil.	N/A	Once in the permit term unless revised
Documentation of the basis for the application rates used for each field where manure, litter, or wastewater is applied.	N/A	Once in the permit term unless revised
Documentation showing the total nitrogen and phosphorus to be applied to each field including nutrients from the application of manure, litter, and wastewater and other sources	Pounds/acre	Once in the permit term unless revised
Documentation of manure application equipment inspection	N/A	Seasonally
Manure Transfer ***(Note: Required by the NPDES CAFO Regulation – applicable to Large CAFOs)***		
For all manure transfers the CAFO must maintain the following records:		
• Date of transfer	N/A	As necessary
• Name and address of recipient	N/A	As necessary
• Approximate amount of manure, litter, or wastewater transferred	Tons/gallons	As necessary
[1] Refer to the state nutrient management technical standard for the specific analyses to be used. [2] Visual inspections should take place daily during the course of normal operations. The completion of such inspection should be documented in a manner appropriate to the operation. Some operations may wish to maintain a daily log. Other operations may choose to make a weekly entry, when they update other weekly records, that required daily inspections have been completed. [3] Total design volume includes normal precipitation less evaporation on the surface of the structure for the storage period, normal runoff from the production area for the storage period, 25-year, 24-hour precipitation on the surface of the structure, 25-year, 24-hour runoff from the production area, and residual solids. [4] Including quantity/volume of manure, litter, or process wastewater applied and the basis for the rate of phosphorus application.		

[40 CFR 122.42(e)(2) and (3); 40 CFR 412.37(b) and (c)]

The permittee shall maintain a log recording information obtained during the inspection.

V. ANNUAL REPORTING

Under this permit, the permittee must submit an annual report to the Director by March 31st of each year. The requirement and criteria for the annual report are specified in 40 CFR 122.42(e)(4).

The annual report must include the following information:

a. The number and type of animals, whether in open confinement or housed under roof;

b. Estimated amount of total manure, litter and process wastewater generated by the CAFO in the previous 12 months (tons/gallons);

c. Estimated amount of total manure, litter and process wastewater transferred to other person by the CAFO in the previous 12 months (tons/gallons);

d. Total number of acres for land application covered by the NMP;

e. Total number of acres under control of the CAFO that were used for land application of manure, litter and process wastewater in the previous 12 months;

f. Summary of all manure, litter and process wastewater discharges from the production area that have occurred in the previous 12 months, including date, time, and approximate volume;

g. A statement indicating whether the current version of the CAFO's NMP was developed or approved by a certified nutrient management planner;

h. Actual crops planted and actual yields for each field for the preceding 12 months;

i. Results of all samples of manure, litter or process wastewater for nitrogen and phosphorus content for manure, litter and process wastewater that was land applied;

j. Results of calculations conducted in accordance with Parts III.A.1.g.i(A) (for the Narrative Rate Approach);

k. Amount of manure, litter, and process wastewater applied to each field during the preceding 12 months, and;

l. For CAFOs using the Narrative Rate Approach to address rates of application:
   - The results of any soil testing for nitrogen and phosphorus conducted during the preceding 12 months.
   - The data used in calculations conducted in accordance with Part III.A.1.g.i(A).
   - The amount of any supplemental fertilizer applied during the preceding 12 months.

VI. STANDARD CONDITIONS

This NPDES Permit for CAFOs incorporates the standard conditions applicable to all permits issued under the NPDES program. These conditions consist of: general conditions, proper operation and maintenance, monitoring and records, reporting requirements, signatory requirements, certification, availability of reports, and penalties for violations of permit conditions. Additional information on each of these standard permit conditions is contained in Section VI of this permit [40 CFR Part 122.41].

Endangered Species Act (ESA) Requirements: Section 7(a) of the Endangered Species Act requires federal agencies to insure that any actions authorized, funded, or carried out by an Agency are not likely to jeopardize the continued existence of any federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species.

Federally listed threatened, endangered and candidate species and proposed and designated critical habitat found in Corson County, South Dakota include:

South Dakota - Endangered Species by County List
(updated 28 November 2012)

Whooping Crane (Grus americana)	E
Piping Plover (*Charadrius melodus*)	T
Least tern (Sterna antillarum)	E
Sprague's pipit (*Anthus spragueii*)	C
Pallid sturgeon (*Scaphirhynchus albus*)	E
Black-footed ferret (*Mustela nigripes*)	E

T Threatened
E Endangered
C Candidate

The above information was obtained from the following website:
http://www.fws.gov/southdakotafieldoffice/

EPA finds that this permit is "Not Likely to Adversely Affect" any of the species listed above by the US Fish and Wildlife Service under the Endangered Species Act. This facility is a no discharge facility. The closest named water stream is Oak Creek. Oak Creek is a tributary to the Missouri River.

National Historic Preservation Act (NHPA) Requirements: Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470(f) requires that federal agencies consider the effects of federal undertakings on historic properties. EPA has evaluated its planned reissuance of the NPDES permit for Corson County Feeders to assess this action's potential effects on any listed or eligible historic properties or cultural resources. EPA does not anticipate any impacts on listed/eligible historic properties or cultural resources because this permit is a renewal and will not be associated with any new ground disturbance or changes to the volume or point of discharge. During the public comment period, EPA notified the Tribal Historic Preservation Offices (THPOs) of the Standing Rock Sioux Tribe Reservation of our planned issuance of this NPDES permit and requested their input on potential effects on historic properties and EPA's preliminary determination in this regard.

Comments received and addressed below:

Response to Comments, Wulf Cattle Depot Permit (SD-0034606)

The only comments received where from the South Dakota Department of Environment and Natural Resources. A summary of the significant comments and the responses to those comments are given below:

1. Natural Resource Conservation Service (NRCS) technical standards 360 and 590 are referenced. It is not clear if the national standards or South Dakota NRCS standards are referenced. The SD NRCS 590 standard changed in December of 2012 http://efotg.sc.egov.usda.gov/references/public/SD/590.pdf. It does not appear the current standard is met by the operation's nutrient management plan. We also believe it unlikely the nutrient management plan meets the current NRCS national standard. **We recommend that EPA clarify whether the national NRCS standards or South Dakota NRCS standards are required to be implemented.**

   Response: *Once a national standard is released, individual states have 12 months to review the national standard and adapt it for state-specific conditions. The national standards cannot be used directly by a facility, permitee or State, and a state-specific standard for each state must be developed. Therefore, in this permit, it will be the South Dakota NRCS standards that permittee is required to comply with.*

   Therefore, EPA has changed Part II.A.4 from the "United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) technical standards (available at http://efotg.nrcs.usda.gov/references/public/SD/590_Notice264.pdf" to "South Dakota Natural Resources Conservation Service (NRCS) technical standards http://efotg.sc.egov.usda.gov/references/public/SD/590.pdf."

   Additionally, any place in the permit or Statement of Basis where a NRCS Standard has been referenced, the state abbreviation "SD" has been added beforehand for clarification.

   Part III.B of the permit requires all closure of lagoons and other earthen or synthetic lined basins must be consistent with NRCS Conservation Practice Standard Code 360 (Closure of Waste Impoundments). EPA has added "SD" before NRCS Conservation Practice Standard Code 360 and added following web link (http://efotg.sc.egov.usda.gov/references/public/SD/360.pdf for clarification.

2. Based on our review of the nutrient management plan, it is unclear whether all of EPA's required nutrient management planning technical standards will be met. We did not verify they were all present, but we did not see anything referencing acceptable methods for soil or manure sampling or acceptable laboratories. This issue may be addressed if the current South Dakota NRCS 590 standard is referenced. **We recommend EPA verify that all EPA required technical standards are met by the nutrient management plan.**

   Response: *For soil sampling, the South Dakota NRCS 590 standard requires, "Soil samples will be taken as per SDSU recommendations found in the SDSU Soil Testing Laboratory Soil Sample Information Sheet, or SDSU-FS935, "Recommended Soil Sampling Methods for South Dakota." See Section A, Part g) of the NMP: Protocols for Manure and Soil Testing in the NMP which states soil samples will be collected and prepared according to the FS*

935, "Recommended Soil Sampling Methods for South Dakota." For manure sampling, SD NRCS 590 Standard Code requires "Samples must be collected, prepared, stored, and shipped, following SDSU guidance (SD-NRCS-FS-36) or industry practice." See Section A, Part h) of the NMP: Protocols for Land Application of Manure and Wastewater which states land application of manure will be done in accordance with SDSU EC 750. SDSU EC 750 is a fertilizer recommendation guide and not a sampling method. A copy of the SD NRCS Fact Sheet-36 is located in Section N of the NMP.

However, in response to comments, EPA has required the facility to update its NMP which now states,

"Soil samples will be collected and prepared according to the FS 935, "Recommended Soil Sampling Methods for South Dakota". Testing will be conducted by an Agvise Laboratories using analytical procedures. Agvise Laboratories is located at 902 13 Street North, P.O. Box 187, Benson, MN 56215. Soil sampling areas will be taken from uniform areas. A certification of the location and number of representative cores collected from the field will be submitted with each soil test. A representative number of cores will be taken from each area by either of the following methods:

- *Soil sample cores will be taken to a depth of 24 inches. The top 6 to 8 inches of each core will be combined to obtain a surface sample. The remaining portions of each core will be combined to obtain a profile sample. The surface sample will be tested for organic matter, pH, phosphorus, potassium, and nitrate-N. The profile sample will be tested for nitrate-N.*
- *Surface and profile samples will be obtained from separate cores. Surface sample cores will be taken to a depth of 6 to 8 inches and will be tested for organic matter, pH, phosphorus, and potassium. Profile soil sample cores will be taken to a depth of 24 inches and will be tested for nitrate-N.*

Each field will have a surface soil test taken within 12 months prior to the first year of a new plan, and thereafter a minimum of every three years, when used for land application of manure, litter, or process wastewater. Annual testing will be conducted during the permit cycle if manure, litter, or process wastewater is applied two or more consecutive years. Profile soil samples will be taken within 12 months prior to any land application of manure, litter, or process wastewater.

Manure, litter, compost, and process wastewater will be analyzed a minimum of once annually for total nitrogen, organic nitrogen, ammonium-nitrogen, phosphorus, and moisture content. Manure samples will be collected, prepared, stored and shipped in accordance with Fact Sheet SD-NRCS-FS-36, "Sampling Manure for Nutrient Management"; this can be found in Section O. Testing will be conducted by either "Minnesota Valley Testing Laboratories, Inc located at 1126 N. Front St., New Ulm, MN, or by South Dakota State University testing lab. A form for the SDSU testing lab is located in Section O."

3. **We recommend that EPA verify field ownership for the manure application agreements with the county. One of the most common p80roblems we see in our review of nutrient management plans is people other than the land owner signing agreements.** One of the manure application agreements is signed by a trustee on behalf of a trust. **We recommend EPA verify the trustee is the sole trustee or has the authority to sign on behalf of all trustees.**

   Response: *Part VI.A.5 of the permit states, "The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State/Tribal or local laws or regulations."*

4. The nutrient management plan allows the producer to transfer manure to others, bypassing the permit's main nutrient management planning requirements. **DENR wants EPA and the producer to know that if we receive complaints about manure transferred to land where South Dakota claims jurisdiction, we may require the operation to comply with section 1.2.2.4. of DENR's general permit, which requires out of state operations get permit coverage under the general permit for nutrient management planning activities in South Dakota.**

   Response: *Comment received.*

5. The receiving water section of the Statement of Basis appears to use beneficial uses adopted by the Standing Rock Tribe, but not yet approved by EPA. Even though the permit is for no discharge, we question this use.

   Response: *EPA has also added the designated uses of the Missouri River (Lake Oahe) to the Statement of Basis.*

6. The marker location in pond #4 is not shown on the plans. Since the pond does not have a flat bottom, putting the marker in different locations could change the maximum operating level. All the ponds except for pond #4 do not have markers because the interpond piping is at the maximum operating level. If ice blocking the interpond piping might be an issue, EPA may want to require a permanent marker for all the holding ponds. **We recommend EPA require a pond marker location for pond #4 and verify with the depth at that location, the marker detail is adequate.**

   Response: *A staff gauge (or depth marker) is located in pond #4 as shown on Sheet 20 of the as-built diagrams.*

7. On sheet 29, it appears the cleanout is going in the wrong direction.

   Response: *The arrows on Sheet 29 indicate the locations of the sewer clean-outs on the sewer line and not the flow direction. Flow direction will be dictated by gravity as all lines are gravity-fed and all sewer lines flow by gravity to Pond #4.*

However, the "Typical Cleanout Detail" on the lower left-hand corner of Sheet 29 is used to illustrate a typical cleanout design. The flow direction on this is incorrect and the engineering company has been notified of this error and informed that the "Typical Cleanout Detail" design/diagram needs to be modified.

However, all clean-out locations and flow directions for this facility are correctly indicated on the as-built.

8. It appears that the operation is using the railroad right of way for a conveyance. Our experience is railroads do not normally allow drainage in their right of way. **We recommend the operation get an easement from the railroad to allow this.**

   Response: *Part VI.A.5 of the permit states, "The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State/Tribal or local laws or regulations."*

9. The plans show the use of significant lengths of dual wall HDPE piping. The South Dakota Natural Resources Conservation Service has had issues with cracking of dual wall or dual wall HDPE pipe when used in dams and no longer allows its use except in culvert applications**. Because of this we strongly recommend the engineer contact the manufacturer to ensure the specifications are adequate for the pipe installation in this application to ensure this pipe remains watertight.**

   Response: *Part VI.B of the permit requires the permittee to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.*

10. The O&M guideline is unsigned and contained emergency contact information for DENR. **We recommend the O&M be signed and that EPA's emergency contact information replace DENR's.**

    Response: *The O&M guideline has been modified to replace the State's contact information with EPA's contact information and the updated guideline has been signed and included in the NMP.*

11. We did not see any flood routing calculations included with the manure management system's design. Flood routing calculations show how quickly the sediment basin will empty into the holding pond, if water is retained in the sediment basin, how far it will back up in the lots, and that it will not overflow and leave the manure management system. DENR requires the modeling show one foot of freeboard is available in the sediment basin. **We recommend EPA require flood routing of the sediment basins.**

Response: *Part VI.B of the permit requires the permittee to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.*

12. The manure management system design calculations in the permit application use different NRCS curve numbers in different calculations. **We recommend the curve numbers be consistent.**

    Response: *EPA has received an update permit application using the same NRCS curve numbers as the NMP.*

13. There did not appear to be a piping profile or pressure test results provided for the permanent irrigation piping. **We recommend pressure test results be required to ensure the line is watertight and either a piping profile to show the pipeline will not freeze or the O&M guideline include a procedure for emptying the pipeline to prevent freezing.**

    Response: *Part VI.B of the permit requires the permittee to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.*

14. There appear to be no specifications for the pond liners, liner testing requirements, or concrete specifications in the application. **We recommend the plans include these to ensure the ponds are watertight and to ensure the longevity of concrete.**

    Response: *Part VI.B of the permit requires the permittee to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.*