

Statement of Basis

FACILITY: Sunlight Ranch Company

CAFO NPDES PERMIT No.: MT0029424

RECEIVING WATER: Little Bighorn River

FACILITY CONTACT: Justin Hossfeld, President
PO Box 68
Wyola, Montana 59089
406-343-2421

LOCATION: 9687 Little Horn Road
Wyola, Montana 59089
SW ¼ of Section 3, NW ¼ of Section 10, Township
9 South Range 34 East
Latitude 45.069005° N and Longitude 107.528372° W
Crow Reservation, Big Horn County, Montana

PERMIT TYPE: Indian Country, Minor Permit, Permit Renewal

Background Information

The Environmental Protection Agency (EPA) directly implements the Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) on Indian country lands within the State of Montana. This is a renewal permit for an existing beef cattle feedlot located on the Crow Reservation southwest of Wyola, Montana, off Little Horn Road as shown in Figure 1 and thus is in “Indian country” as defined at 18 U.S.C. § 1151. The EPA has not authorized either the Crow Tribe or the state of Montana to implement the CWA NPDES program on the Crow Reservation.

The feedlot has been operating at this site since 1964 and has been permitted under individual NPDES permit number MT0029424 by the EPA since 2006. The 2006 permit, which expired in 2011, has been administratively extended until the permit is renewed because Sunlight Ranch Company submitted a new permit application and nutrient management plan in a timely manner.

The facility meets the definition of a large Concentrated Animal Feeding Operation (CAFO) as it contains about 100 acres of confinement pens with an animal capacity of about 11,000 beef calves and usually operates about 250 days a year from September through May. A 27-acre-foot storage pond downhill of the confinement area is designed to catch all process generated waste waters as well as storm water from a 25-year, 24-hour storm. The 25-year, 24-hour storm for this area is 3.2 inches of precipitation.

Annual reports the Sunlight Ranch Company submits to EPA show the following numbers for cattle confined and waste produced by year during the current permit period.

Year	Cattle #	Wastewater Gal.	Manure Tons ¹	Acres used for land application
2006	9,026	2.4 million	n/a	182
2007	9,000	2.4 million	n/a	182
2008	10,000	2.66 million	n/a	260
2009	10,000	2.66 million	n/a	260
2010	10,000	2.66 million	n/a	260
2011	10,000	2.66 million	n/a	425
2012	10,500	10.48 million	6,324	425
2013	10,000	32.74 million	9,295	425
2014	10,000	35.05 million	8,208	425
2015	10,000	22.5 million	3,629	425

1. Manure was not measured as no manure has been removed from pens for land application.

Figure 1. Map of Sunlight Ranch Facility and Surrounding Area



Receiving Waters

The closest surface water to the facility is the Little Bighorn River, shown in Figure 1 above, which is located about nine-tenths of a mile south of the confinement area, across agricultural

fields, a county road and vegetated river bottom flood plain. The Little Bighorn River enters Montana and the Crow Reservation about three miles upstream from the facility. From the facility the river stays entirely within the reservation, flowing northerly through or adjacent to the communities of Wyola, Lodge Grass and Crow Agency before joining the Bighorn River near the town of Hardin, Montana. There are three other CWA NPDES discharges to the Little Bighorn River downstream of this facility, the Town of Lodge Grass's wastewater lagoons and the Crow Agency's water treatment plant and wastewater lagoons. The Crow Tribe does not have Tribal – or EPA – approved water quality standards.

Monitoring Data

The facility has reported two discharges, in 2007 and 2011 during flood conditions. These discharges probably did not reach waters of the United States but had some potential to reach such waters, so the company conducted notifications and monitoring as required in their permit for discharges of wastewater to waters of the United States. The first discharge was on June 8, 2007 during a high precipitation and flood event and occurred after 3.15 inches of rain fell within 18 hours. This large rain event was preceded by 2.75 inches of rain the week before and the company had pumped out the wastewater pond on June 7, 2007. The second discharge was on May 21, 2011, again after a heavy rain event and during a period of flooding in the area. The rainfall was 5.6 inches in 24 hours, which had been preceded by 2.9 inches of rain. National Weather Service records indicate nearby communities received even larger amounts of rainfall during the same time period and there was extensive flooding throughout the Little Bighorn valley causing evacuations and road closures. Again, the company had pumped out and land applied the wastewater impoundment contents on May 20, 2011, just prior to the rainfall event. During each discharge event the overflow from the impoundment went into Antler Ditch, an adjacent irrigation canal which terminates in a hay field about four miles away. From the hay field discharge water would have to flow overland about two miles to the Little Bighorn River, the nearest water of the United States. The company met all permit requirements regarding reporting and monitoring for both discharges and did not violate their permit requirements.

Analytical Results for each of the two discharges are summarized in the following table:

Sunlight Ranch Storm Discharges ¹								
Year	Fecal Coliform	TSS	BOD ₅	NH ₃	NO ₃ +NO ₂	TKN	Total N	Total P
2007-1st	50,000	50	43	12.8	0.12	68	68.1	28
2007-2nd	8,800	43	30	14	0.23	63.7	63.9	31.5
2007-3rd	7,300	55	30	15.3	0.17	62.9	63.1	27.9
2011-1st ²	150,000	725	170	21.1	0.10	70	70	22.7
2011-2nd ²	160,000	790	170	19.8	0.11	70	70	20.7
2011-3rd ²	210,000	1,140	210	26.8	0.13	95	95	28.1

1. Fecal coliform value is number per 100 ml all other values are mg/l.
2. Because of flooded roads the permittee was not able to submit samples to the analytical laboratory within the required holding times for fecal coliform and BOD₅.

I. GENERAL STATUTORY AND REGULATORY INFORMATION

Section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits the discharge of pollutants to waters of the U.S. in the absence of authorizing permits, including NPDES permits. The CWA § 402, 33 U.S.C. Part 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 §§ 301, 304, and 401. [33 U.S.C. §§ 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 § 309 of the CWA. [33 U.S.C. § 1319]

A. Permit Expiration

In accordance with 40 CFR § 122.46(a), this permit will have a term of not more than five years from the effective date.

II. 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 § 301 by requiring that each NPDES permit issued under § 402 include conditions that meet technology-based effluent limitations and standards, as well as water quality standards.

1. Technology-Based Effluent Limitations (TBELs)

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

Pursuant to CWA § 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 CWA's goals of eliminating the discharge of pollutants as much as practicable and to maintain water quality.

a. TBELs and Standards – Production Area

There must 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]

(1) Whenever precipitation causes an overflow of manure, litter, or process wastewater, pollutants in the overflow may be discharged into U.S. water provided;

- (i) The production area is designed, constructed, operated and maintained to contain all manure, litter and process wastewater including the runoff and direct precipitation from a 25-year, 24-hour precipitation on the surface (at the required design storage volume level) of the facility; 25-year, 24-hour rainfall event;
- (ii) The production area is operated in accordance with the additional measures and records required by 40 CFR § 412.37(a) and (b).

2. Additional Measures – Applicable to the Production Area [40 CFR § 412.37(a) and (b)]

Visual inspections of the production area including: [40 CFR § 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 (WQBELs) and Standards – Production Area

In those cases, where TBELs are not sufficient to meet water quality standards, the permitting authority must develop more stringent WQBELs on a site-specific basis. NPDES permits for CAFOs may include BMPs as WQBELs or use BMPs that are reasonably necessary to meet water quality-based effluent limitations. As the Crow Tribe has not developed water quality standards the EPA has determined that TBELs derived from the effluent limit guidelines promulgated in 40 CFR Part 412 are adequate protection for waters of the United States and Tribal waters. [40 CFR § 122.44(k)]

4. TBELs 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 § 412.4(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 § 412.4(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 § 412.4(c)(2)]
- d. In addition to the above technology-based effluent limitations for the land application areas, EPA has established BMP 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 from 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 where needed to control discharges from land application areas. [Based on best professional judgement (BPJ) of the permittee]
 - 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. Where manure, litter, or process wastewater has been applied in accordance with the CAFO's site specific NMP, a precipitation related discharge of manure, litter, or process wastewater from land areas under the control of the CAFO is considered to be an agricultural storm water discharge.
 - (ii) Manure and process wastewater shall not be applied to frozen, snow-covered, or saturated soil. If application to frozen, snow-covered, or saturated soil is absolutely necessary, the operator shall notify the permitting authority of any deviation from the NMP. [40 CFR § 122.23(e)]
 - c. WQBELs

Discharges from CAFO land application areas, except where it is an agricultural storm water discharge, are subject to NPDES requirements, including WQBELs. 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 TBELs 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 WQBELs 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. As this facility has not had any dry weather discharges, which would need QBELs, no QBELs were developed for this permit.

6. Effluent Limitations – Other Discharges.

a. Other production area discharges.

Permit limitations are based on 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 QBELs. No such discharges occur at this facility.

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 §§ 122.1(f) and 122.49]

III. SPECIAL CONDITIONS

A. Nutrient Management Plan (NMP)

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 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 NRCS Conservation Practice Standard Code 590 (Nutrient Management). As

provided in 40 CFR § 123.36, these technical standards must be consistent with 40 CFR § 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)] The Sunlight Ranch NMP was delivered to the EPA on May 2, 2016 and after reviewing the NMP, the EPA determined the NMP was complete.

Once the permit application and NMP are complete and have been reviewed by the Director, the Director will notify the public and make available for public review and comment 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 (<https://www.epa.gov/region8/npdes-permits-document-download>). The notice will also provide the opportunity for the request of a public hearing on the proposed permit and NMP in accordance with 40 CFR §§ 124.11 and 124.12. 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:

- (i) 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.

- (ii) The terms of the NMP 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.
- (iii) 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.
- (iv) 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. [40 CFR § 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. NMP Kept On-Site

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 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:

1. Maintain records showing the date and amount of manure, litter, and/or process wastewater that leaves the permitted operation;
2. Record the name and address of the recipient;
3. Provide the recipient(s) with representative information on the nutrient content of the manure, litter, and/or process wastewater; and
4. These records must be retained on-site, for a period of five years, and be submitted to the permitting authority upon request. [40 CFR § 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 verbal 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 (BOD₅), 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 (<i>Note: Required by the NPDES CAFO Regulation – applicable to all CAFOs</i>)		
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 (<i>Note: Required by the CAFO ELG – applicable to Large CAFOs</i>)		
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 (<i>Note: Required by the CAFO ELG – applicable to Large CAFOs</i>)		
Visual inspection of all water lines	N/A	Daily ²

Table IV-A NPDES Large CAFO Permit Record Keeping Requirements		
Parameter	Units	Frequency
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: <ul style="list-style-type: none"> • Volume for solids accumulation • Design treatment volume • Total design storage volume³ • Days of storage capacity 	Cubic yards/gallons Cubic yards/gallons Cubic yards/gallons Days	Once in the permit term unless revised
Documentation of all overflows from all manure and wastewater storage structures including: (<i>Note: Required by the NPDES Regulation – applicable to all CAFOs</i>) <ul style="list-style-type: none"> • Date and time of overflow • Estimated volume of overflow • Analysis of overflow (as required by the permitting authority) 	Month/day/year Total gallons TBD	Per event Per event Per event
Land Application (<i>Note: Required by the CAFO ELG – applicable to Large CAFOs</i>)		
For each application event where manure, litter, or process wastewater is applied, documentation of the following by field:		
<ul style="list-style-type: none"> • Date of application • Method of application • Weather conditions at the time of application and for 24 hours prior to and following application • Total amount of nitrogen and phosphorus applied⁴ 	Month/day/year N/A N/A Pounds/acre	Daily Daily Daily 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	Bushel/acre	Seasonally
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 (<i>Note: Required by the NPDES CAFO Regulation – applicable to Large CAFOs</i>)		
For all manure transfers the CAFO must maintain the following records:		

<ul style="list-style-type: none"> • Date of transfer • Name and address of recipient • Approximate amount of manure, litter, or wastewater transferred 	<p>N/A</p> <p>N/A</p> <p>Tons/gallons</p>	<p>As necessary</p> <p>As necessary</p> <p>As necessary</p>
<p>¹ Refer to 40 CFR Part 136 and the NRCS publication <i>Recommended Methods of Manure Analysis</i>, A3769 (2003) for the specific analyses to be used.</p> <p>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.</p> <p>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.</p> <p>⁴ Including quantity/volume of manure, litter, or process wastewater applied and the basis for the rate of phosphorus application.</p>		

[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).

A. The annual report must include the following information:

1. The number and type of animals, whether in open confinement or housed under roof;
2. Estimated amount of total manure, litter and process wastewater generated by the CAFO in the previous 12 months (tons/gallons);
3. Estimated amount of total manure, litter and process wastewater transferred to other person by the CAFO in the previous 12 months (tons/gallons);
4. Total number of acres for land application covered by the NMP;
5. 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;
6. 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;
7. A statement indicating whether the current version of the CAFO's NMP was developed or approved by a certified nutrient management planner;
8. Actual crops planted and actual yields for each field for the preceding 12 months;
9. 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;

10. Results of calculations conducted in accordance with Parts III.A.1.g.i(A) (for the Narrative Rate Approach);
11. Amount of manure, litter, and process wastewater applied to each field during the preceding 12 months; and
12. For CAFOs using the Narrative Rate Approach to address rates of application:
 - a. The results of any soil testing for nitrogen and phosphorus conducted during the preceding 12 months.
 - b. The data used in calculations conducted in accordance with Part III.A.1.g.i(A).
 - c. 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 § 122.41]

Endangered Species Act (ESA) Requirements: Section 7(a) of the Endangered Species Act requires federal agencies to ensure 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. According to the official species listing obtained from the U.S. Fish & Wildlife Service's *Information for Planning and Conservation* (IPaC) website (<https://ecos.fws.gov/ipac/>) on April 6, 2017, there are no federally listed threatened, endangered or candidate species and no critical habitat found in the project area.

Because of the finding of no threatened, endangered or candidate species or critical habitat in the project area and because this permit renewal is for an existing activity with no off-site effects, the EPA finds that reissuance of this Permit will have no effect on any of the species listed by the U.S. Fish and Wildlife Service under the Endangered Species Act. When there is no effect to threatened, endangered or candidate species or critical habitat, no consultation is necessary.

National Historic Preservation Act (NHPA) Requirements: Section 106 of the NHPA, 16 U.S.C. § 470(f) requires that federal agencies consider the effects of federal undertakings on historic properties. The EPA has evaluated its planned reissuance of the NPDES permit for the facility to assess this action's potential effects on any listed or eligible historic properties or cultural resources. The 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. The EPA is supplying the draft Permit and Statement of Basis to the Crow Tribal Historical Office for their review and comment on this determination.

Miscellaneous

The renewal Permit will be issued for a period not to exceed five years. The Permit effective and expiration dates will be determined at the time of Permit issuance.

Permit and statement of basis drafted June 9, 2016

Reviewed June 28, 2016

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