CHAPTER 33.1-15-20
CONTROL OF EMISSIONS FROM OIL AND GAS WELL PRODUCTION FACILITIES

Section
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33.1-15-20-01. General provisions.

1. **Applicability.** The provisions of this chapter apply to any oil or gas well facility which emits air contaminants to the atmosphere.

2. **Definitions.** As used in this chapter, all terms not defined herein shall have the meaning given them in section 33.1-15-01-04 or in North Dakota Century Code chapter 23.1-06.

   a. "Actively producing" means a well has been producing for thirty days or more from initial production through the wellhead equipment.

   b. "Casinghead gas" means any gas or vapor, or both gas and vapor, indigenous to and produced from a pool classified as an oil pool by the North Dakota state industrial commission.

   c. "Completion" means an oil well must be considered completed when the first oil is produced through wellhead equipment into lease tanks from the ultimate producing interval after casing has been run. A gas well must be considered complete when the well is capable of producing gas through wellhead equipment from the ultimate producing zone after casing has been run. A dry hole must be considered complete when all North Dakota state industrial commission provisions of plugging are complied with.

   d. "Condensate" means the liquid hydrocarbons recovered at the surface that result from condensation due to reduced pressure or temperature of petroleum hydrocarbons existing in a gaseous phase in the reservoir.

   e. "Continuous burning pilot" means a stable auxiliary flame supported by a reliable fuel source which is independent of wellhead production.

   f. "Cubic foot of gas" means that volume of gas contained in one cubic foot [28.32 liters] of space and computed at a pressure of fourteen and seven-tenths pounds per square inch [1,034 grams per square centimeter] absolute at a base temperature of sixty degrees Fahrenheit [15.5 degrees Celsius].

   g. "Gas well" means a well producing gas or natural gas from a common source of gas supply as determined by the North Dakota state industrial commission.

   h. "Natural gas or gas" means and includes all natural gas and all other fluid hydrocarbons not herein defined as oil.

   i. "Oil" means and includes crude petroleum oil and other hydrocarbons regardless of specific gravity which are produced at the wellhead in liquid form and the liquid hydrocarbons known as distillate or condensate recovered or extracted from gas, other than gas produced in association with oil and commonly known as casinghead gas.

j. "Oil well" means any well capable of producing oil or oil and casinghead gas from a common source of supply as determined by the North Dakota state industrial commission.

k. "Operator" means any person or persons who, duly authorized, is in charge of the development of a lease or the operation of a producing property.

l. "Owner" means the person who has the right to drill into and produce from a pool and to appropriate the oil or gas the person produces.

m. "Pool" means an underground reservoir containing a common accumulation of oil or gas or both; each zone of a structure which is completely separated from any other zone in the same structure is a pool.

n. "Production facility" means all equipment, wells, flow lines, separators, treaters, tanks, flares, gathering lines, and auxiliary nontransportation-related equipment used in the exploration, development, or subsequent production or handling of oil and gas from an oil or gas well or wells which are located on one or more contiguous or adjacent surface properties, and are under the control of the same person (or persons under common control).

o. "Recomplete" or "recompletion" means the subsequent completion of a well in a different pool from the pool in which it was originally completed.

p. "Reservoir" means pool or common source of supply.

History: Effective January 1, 2019.
General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-20-02. Registration and reporting requirements.

1. The owner or operator of any actively producing oil or gas well that is completed or recompleted on or after July 1, 1987, shall submit an oil and gas well registration form available from the department, and an analysis of any gas produced from the well. The registration form and gas analysis must be submitted to the department within ninety days of the well achieving active production status. The registration form must contain sufficient information to allow the department to determine if the oil or gas well and associated production facility is in compliance with all applicable sections of this chapter.

2. [Reserved].

3. The owner or operator of any oil or gas well subject to this section shall inform the department of any change to the information contained on the registration form for a particular well and shall submit a new gas analysis if the composition or the volume of the gas produced from the well has changed from the previous analysis to cause an increase of ten tons per year or more of sulfur (all sulfur compounds expressed as S).

History: Effective January 1, 2019.
General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-20-03. Prevention of significant deterioration applicability and source information requirements.

1. Any oil or gas well production facility that is a major stationary source or a major modification as defined in chapter 33.1-15-15, shall comply with the permitting requirements of chapter 33.1-15-15.

2. To determine prevention of significant deterioration of air quality (PSD) applicability for sulfur dioxide, the following formula must be used:

   E = 0.00084 (R)(T) (% H_2S)

   Where:

   E = sulfur dioxide emission rate (tons/year).

   R = the average daily amount of gas burned, incinerated and/or flared (thousand cubic feet per day at 60°F and 14.7 pisa-MCFD) based upon a thirty-day period. The thirty-day period must be the last thirty operating days of a one hundred eighty-day period following the completion or recompletion of a well. In cases where the well is shut in for extended periods during the one hundred eighty-day period following completion or recompletion, a case-by-case determination of PSD can be requested of the department.

   T = days of operation per year (day/year). This number must be three hundred sixty-five unless there are verifiable physical limitations or a federally enforceable permit that limits the number of operating days.

   % H_2S = mole percent hydrogen sulfide content as determined by the most recent gas analysis.

   The formula is derived as follows:

$$E = \frac{(Mcf)}{day}\frac{(100\ cf)}{Mcf}\frac{(\%\ H_2S)}{100}\frac{(lb-mole)}{379.5cf}\frac{(64.06\ lb)}{lb-mole}\frac{(days)}{year}\frac{(ton)}{2000\ lb}$$

$$E = 0.0084\ \frac{(Mcf)}{day}\frac{(days\ of\ operation)}{year}(\%\ H_2S)$$

   Emissions from all onsite equipment at the production facility must be included in the total annual emission determination.

3. The owner or operator of any oil or gas well production facility subject to subsection 1 of this section shall provide information to demonstrate that emissions from the facility do not significantly contribute to exceeding the ambient air quality standards, as defined in chapter 33.1-15-02, or class I or class II increments, as defined in chapter 33.1-15-15; and shall address other requirements as specified in chapter 33.1-15-15.

History: Effective January 1, 2019.
General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-20-04. Requirements for control of production facility emissions.

1. The emissions from all treaters, separators, engines, incinerators, flares, tanks, and other onsite equipment must comply with the requirements of subsection 5.

2. Each flare used for combusting gas at a production facility must be equipped and operated with an automatic ignitor or a continuous burning pilot which must be maintained and operated in good working order. This is required even if the flare is used for emergency purposes only. A continuous burning pilot is required if this department determines that an automatic ignition system is ineffective due to production characteristics. The flare stack must be of sufficient height to allow for adequate dispersion of air contaminants as necessary to meet the requirements of this article.

3. Any organic compound gases and vapors may be subject to controls as specified in chapter 33.1-15-07.

4. Routine inspections and maintenance of tanks, hatches, compressors, vent lines, pressure relief valves, packing elements, and couplings must be conducted to minimize emissions from equipment at a production facility. Tank hatches must hold a positive working pressure or must be repaired or replaced.

5. The owner or operator of any oil or gas well production facility shall install equipment necessary to ensure that emissions comply with the ambient air quality standards of chapter 33.1-15-02, including hydrogen sulfide and sulfur dioxide; the class I and class II increments for sulfur dioxide, nitrogen dioxide, and particulate matter of chapter 33.1-15-15, if applicable; the odor concentration limits of chapter 33.1-15-16; and any other applicable chapter of this article. For the purpose of this chapter, compliance must be determined outside the surface boundary of the production facility.

6. When a malfunction, the correction of a malfunction, or maintenance at any oil and gas well production facility occurs that can be expected to cause the emission of air contaminants in violation of this article for longer than twenty-four hours, the person responsible for such installation shall notify the department of such malfunction or maintenance as set forth in section 33.1-15-01-13. This subsection pertains only to the reporting of malfunctions and maintenance and does not obviate the source's responsibility to comply with the remainder of this chapter or article.

7. The owner or operator of any oil and gas well production facility completed prior to the effective date of section 33.1-15-20-04 shall comply with the requirements of this chapter within six months of the effective date of these revisions. The owner or operator of any oil and gas well production facility completed after the effective date of the revisions to section 33.1-15-20-04 shall comply with the requirements of this chapter within ninety days of the completion of the well.

History: Effective January 1, 2019; amended effective July 1, 2020.
General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21