

# **Grain Elevator Air Quality Permitting Frequently Asked Questions (FAQ)**

## **Disclaimer**

This document, entitled “Grain Elevator Air Quality Permitting Frequently Asked Questions (FAQ),” is intended to serve as guidance only, and is not to be construed as taking the place of any statute, rule or other applicable law or any policy of the Department. This document was compiled on December 11, 2007, and may not reflect changes in statutes, rules or other law that occur after this date. In the event that any information contained in this document conflicts with any enacted statute, rule or other applicable law, the statute, rule or other applicable law controls. The purpose of this document is to simplify the permitting process for parties unfamiliar with the Department’s rules. Please contact the Department for the most recent applicable rules.

## **1) Why is the Department now requiring grain elevators to obtain air quality permits and implement practices for controlling air pollution?**

Owners and operators of air pollution sources, including owners and operators of grain elevators, are required to obtain permits and meet applicable air pollution standards. However, in 1978 the Sixty–Seventh Iowa General Assembly limited the Department’s ability to regulate country grain elevators (1978 Iowa Acts, chapter 1004, section 17). Since that time, the Department has not enforced the requirement that the owner or operator of a country grain elevator obtain air construction permits. However, the passage of the 1990 amendments to the federal Clean Air Act (CAA) created a new operating permit program for major sources of regulated air pollutants. As a result, the U.S. Environmental Protection Agency (EPA) required that the restrictions limiting the regulation of country grain elevators be removed to allow Iowa to have a federally approved operating permit program. In 1995, the Iowa General Assembly subsequently removed these restrictions (1995 Iowa Acts, chapter 2, section 2), and EPA granted federal approval of Iowa’s operating permit program in 1995. Removal of the restrictions necessitated that the Department review and permit air emissions at hundreds of country grain elevators and other similar facilities to bring them into compliance with the air construction permitting requirements of rule 567—22.1(455B).

## **2) What type of grain handling facilities does the new rule apply to?**

The requirements of this rule apply only to country grain elevators, country grain terminal elevators, grain terminal elevators and feed mill equipment, as these terms are defined in subrule 22.10(1).

A country grain elevator is an elevator that receives more than 50 percent of its grain from farmers in the immediate vicinity and is not located at any wheat flour mill, wet corn mill, dry corn mill (human consumption), rice mill, or soybean oil extraction plant.

A country grain terminal elevator is an elevator that receives 50 percent or less of its grain from farmers in the immediate vicinity; has a permanent storage capacity of less than or equal to 2.5 million U.S. bushels; and is not located at any wheat flour mill, wet corn mill, dry corn mill (human consumption), rice mill, or soybean oil extraction plant.

A grain terminal elevator is an elevator that receives 50 percent or less of its grain from farmers in the immediate vicinity; has a permanent storage capacity of more than 2.5 million U.S. bushels; and is not located at any wheat flour mill, wet corn mill, dry corn mill (human consumption), rice mill, or soybean oil extraction plant.

Feed mill equipment means grain processing equipment that is used to make animal feed including, but not limited to, grinders, crackers, hammermills, and pellet coolers, and that is located at a country grain elevator, country grain terminal elevator or grain terminal elevator.

**3) When are farms considered to be in the “immediate vicinity” of a grain elevator?**

A farm is considered to be in the immediate vicinity of a grain elevator when the grain elevator is close enough for the farmer to economically truck grain to that grain elevator.

**4) What types of storage capacity are considered to be “permanent storage capacity?”**

Permanent storage capacity is capacity that is inside of a building, bin or silo. These structures must also have a roof. Ground piles of grain, either with or without a perimeter wall do not meet the definition of a “building, bin, or silo.”

**5) What types of grain handling facilities are not included in the new rule?**

The requirements of this rule do not apply to equipment located at grain processing plants or grain storage elevators, as “grain processing” and “grain storage elevator” are defined in rule 567—20.2(455B).

Grain processing means the equipment, or the combination of different types of equipment, used in the processing of grain to produce a product primarily for wholesale or retail sale for human or animal consumption. Grain processing

includes the processing of grain for production of biofuels, except for “feed mill equipment,” as “feed mill equipment” is defined in subrule 22.10(1).

A grain storage elevator means any plant or installation at which grain is unloaded, handled, cleaned, dried, stored, or loaded and that is located at any wheat flour mill, wet corn mill, dry corn mill (human consumption), rice mill, or soybean oil extraction plant which has a permanent grain storage capacity (grain storage capacity which is inside a building, bin, or silo) of more than 35,200 m<sup>3</sup> (ca. 1 million U.S. bushels).

**6) What are the permitting requirements under the new rule?**

There are different options for permitting depending on the level of potential emissions from your facility. The Department used the emissions thresholds typically used for permitting grain elevators in surrounding states and split the grain elevator source sector into four groups characterized by their Potential to Emit (PTE) for PM<sub>10</sub> (particulate matter with an aerodynamic diameter less than or equal to 10 microns) The PTE thresholds that trigger specific requirements are set at 15, 50, and 100 tons per year (tpy), as illustrated in the table below. The requirements for permitting, emissions control, and emissions reporting and record keeping increase for facilities with a greater PTE.

Grain Elevator Group	PM10 PTE (tons per year)
Group 1	<15
Group 2	≥15 and ≤ 50
Group 3	> 50 and < 100
Group 4	≥ 100

In addition, the new rule includes permitting requirements for feed mill equipment that is located at a country grain elevator, country grain terminal elevator or grain terminal elevator. The owner or operator of feed mill equipment shall obtain an air construction permit as specified under subrule 22.1(1) for each piece of feed mill equipment that emits a regulated air pollutant.

**7) How does an owner or operator determine which permitting group is applicable?**

The facility PM<sub>10</sub> PTE must be calculated to determine the permitting group. The method for calculating the PTE is based on the facility type. The PTE Calculation Tool developed by the Department must be used to determine facility PTE. The PTE Calculation Tool may be downloaded free of charge at <http://www.iwrc.org/>.

**8) When do owners or operators have to comply with these new requirements?**

The permitting, emissions control, record-keeping and reporting requirements apply to both new and existing facilities. The owner or operator of an existing facility may submit the appropriate registration or permit application anytime on or after December 4, 2007 and on or before **March 31, 2008**. The owner or operator of a new facility must apply for and obtain the appropriate registration or permit prior to initiating construction of air emissions equipment.

If emission controls are needed to obtain the Group 1 or Group 2 permitting status and control credit is taken in the PTE Calculation Tool, control equipment must be installed and operating by **March 31, 2009**.

The owner or operator of existing feed mill equipment located at a grain elevator subject to the new rules shall provide the appropriate permit applications to the department on or before **March 31, 2008**. The owner or operator of new feed mill equipment shall provide the appropriate permit applications to the department prior to initiating construction or reconstruction of feed mill equipment.

**9) How do I know if my facility is considered to be “existing” or “new?”**

An “existing” facility is one that commenced construction or reconstruction before February 6, 2008. A “new” facility is one that commenced construction or reconstruction on or after February 6, 2008.

**10) What does “reconstruction” mean?**

Reconstruction means the replacement of components at an existing facility to such an extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility. “Fixed capital cost” means the capital needed to provide all the depreciable components. Facility owners or operators who have additional questions or concerns related to the applicability of reconstruction should contact the Department at 1-877-AIR-IOWA for additional assistance.

**11) What is the particulate matter standard that applies to bin vents under the new rule?**

The Department is changing the particulate matter standard to 1.0 grain per dry standard cubic foot (gr/dscf) of exhaust gas for existing grain bin vents located at country grain elevators, country grain terminal elevators, and grain terminal elevators. Information collected during the registration process for the Department’s amnesty program shows that most bins were constructed uncontrolled and that an emission rate of 1.0 gr/dscf of exhaust gas is more representative of an uncontrolled bin vent.

The 1.0 gr/dscf standard will also apply to new grain bin vents located at country grain elevators. However, new grain bin vents located at country grain terminal elevators and grain terminal elevators will continue to be subject to the current particulate matter standard of 0.1 gr/dscf of exhaust gas. The Department has found that construction of new bins at other facilities with throughputs similar to those at country grain terminal elevators or grain terminal elevators has shown that emissions of particulate matter from the new bins can be controlled to meet the existing 0.1 gr/dscf of exhaust gas emission limit. For example, all grain bins constructed at new ethanol plants over the last few years have included particulate controls to meet this standard. Therefore, controlling emissions to this level is reasonable for grain elevators of this size.

Bin vents constructed or reconstructed on or after March 31, 2008 are considered to be new sources.

**12) When does the Department's 2003 amnesty program end?**

The Department began the amnesty program in August 2003 by asking grain elevator owners and operators to complete an amnesty registration form. Submittal of the amnesty registration form granted a facility temporary amnesty from the requirement to obtain a construction permit and temporary amnesty from the emission limits for particulate matter specified in rule 567—23.4(455B).

For Group 1 facilities, the grain elevator amnesty will no longer apply when the Group 1 registration becomes effective. The Group 1 registration will become effective upon the later of March 19, 2008 or the Department's receipt of the signed registration and PTE calculations. The Department will notify Group 1 facility owners or operators in writing by mail of receipt of the registration within 2 weeks of receipt. For all other facilities in Groups 2, 3, or 4, the amnesty ends on the date of permit issuance.

For any facility owner or operator who does not submit the required registration or permit application on or before March 31, 2008, the amnesty will automatically end on March 31, 2008. Owners or operators who do not submit a registration or permit application on or before March 31, 2008 may be subject to enforcement actions.

**13) For Title V and Prevention of Significant Deterioration (PSD program applicability purposes, should 99.5 tpy of emissions of an air pollutant be rounded to 100 tpy?**

Any emissions greater than 99.4 tpy of an air pollutant should be rounded to 100 tpy for Title V and PSD applicability purposes.

**14) If I have more than one facility in the same town, should the facilities be considered one facility for purposes of calculating PTE with the PTE Calculation Tool?**

Multiple grain elevators located in the same town or close proximity to each other may be considered as one facility if they are under common ownership or control. If in doubt about whether to treat multiple facilities as one facility for PTE calculation purposes, please contact the Department at 1-877-AIR-IOWA for assistance in making this determination.

**15) Do I have to oil 100 percent of my grain to take credit in the PTE Calculation Tool for grain oiling?**

Owners and operators may take credit for oiling in the PTE Calculation Tool if at least 80 percent of the grain handled annually at the facility is oiled at receiving or loadout.

**16) What grain cleaning equipment should be included in the PTE calculations?**

Only grain cleaners with mechanical or pneumatic input have to be included in the PTE calculations. Passive systems such as stationary screens or grates are not included.