



## Prepared Feeds Manufacturing (Feed Mills) Air Quality Permitting Frequently Asked Questions (FAQ)

### 1. What air emission sources are located at feed mills?

A list of equipment with air emissions at feed mills includes, but is not limited to:

- Grain Receiving
- Storage bins (grain, ingredient, and feed)
- Grain and Feed Handling (general)
- Grain cleaning
- Conveyors & Elevators (these would be part of handling)
- Hammermills/roller mills/grinders
- Flaking
- Presses
- Scales
- Feed Mixers
- Dryers
- Conditioners
- Pellet Coolers
- Screeners
- Crumbler/granulator (type of mill)
- Bagging
- Feed Loadout
- Boilers

### 2. What regulations apply to feed mills?

#### Air Construction Permits

You must obtain an air construction permit, as specified under 567 IAC 22.1(1), for each piece of feed mill equipment that emits a regulated air pollutant unless the equipment meets a construction permit exemption. The equipment at a feed mill co-located at a grain elevator is not covered by the Group 1 Grain Elevator registration or a Group 2 Grain Elevator permit. For information on permitting grain elevators, go to the [Grain Elevator](#) section of Iowa DNR's website (Scroll down to the *Grain Elevator* section).

Therefore, facilities must obtain a permit or use an exemption for each source of air contaminants at the facility. A list of exemptions can be found on the DNR's Air Quality [Construction Permit Exemptions](#) page. The small unit exemption [567 IAC 22.1(2)"w"] can be used, if applicable, and see the information below for this exemption. In addition, the Department is not pursuing permit applications for equipment that exhausts inside. These are sources that are vented internally, and the emissions are not specifically exhausted using another source, e.g. a room vent. However, emissions from indoor vented equipment are not excluded from determining a facility's potential to emit (PTE) for purposes of the Title V Operating Permit and New Source Review (NSR) programs. Therefore, a company may choose to permit this equipment to limit its potential annual emissions. For additional information on indoor venting sources see the [Indoor Venting Equipment Fact Sheet](#).

#### Iowa Administrative Code (IAC)

The list of rules from the Iowa Administrative Code (IAC) that are typically applicable to feed mills includes, but is not limited to:

- 567 IAC 22.1(1): *Permit required*. Unless exempted in sub rule 22.1(2), no person shall construct, install, reconstruct, or alter any equipment, control equipment, or anaerobic lagoon without first obtaining a construction permit.
- 567 IAC 22.10(2)"d": *Feed mill equipment*. The owner or operator of feed mill equipment, as "feed mill equipment" is defined in subrule 22.10(1), shall calculate the PTE for PM and PM10 for the feed mill equipment as specified in the definition of "potential to emit" in rule 567—20.2(455B). For purposes of determining whether the stationary source is subject to the Prevention of Significant Deterioration (PSD) requirements set forth in 567—Chapter 33, or for determining whether the stationary source is subject to the operating permit requirements set forth in rules 567—22.100(455B) through 567—22.300(455B), the owner or operator of feed mill equipment shall sum the PTE of the feed mill equipment with the PTE of the country grain elevator, country grain terminal elevator or grain terminal elevator.
- 567 IAC 22.10(4): *Feed mill equipment*. This subrule sets forth the requirements for construction permits, operating permits, and emissions inventories for an owner or operator of feed mill equipment as "feed mill equipment" is defined in subrule 22.10(1). For purposes of this subrule, the owner or operator of "existing" feed mill equipment shall have commenced construction or reconstruction of the feed mill equipment

before February 6, 2008. The owner or operator of “new” feed mill equipment shall have commenced construction or reconstruction of the feed mill equipment on or after February 6, 2008.

- 567 IAC 22.3(1): *Issuing permits for stationary sources*. In no case shall a construction permit, which results in an increase in emissions be issued to any facility, which is in violation of any condition found in a permit involving PSD, NSPS, NESHAP, or a provision of the Iowa state implementation plan. If the facility is in compliance with a schedule for correcting the violation and that schedule is contained in an order or permit condition, the Department may consider issuance of a construction permit.
- 567 IAC 23.3(2)“c”: *Fugitive Dust*. See *What are the requirements for fugitive dust?* below.
- 567 IAC 23.3(2)“d”: *Particulate matter. Visible emissions*. No person shall allow, cause or permit the emission of visible air contaminants into the atmosphere from any equipment, internal combustion engine, premise fire, open fire or stack, equal to or in excess of 40 percent opacity.
- 567 IAC 23.4(7): *Particulate matter. Grain handling and processing plants*. The owner or operator of equipment at a permanent installation for the handling of processing of grain, grain products, and grain by-products shall not cause, allow or permit the particulate matter discharged to the atmosphere to exceed 0.1 grain per dry standard cubic foot of exhaust gas.
- 567 IAC 25.1(7): *Tests by owner*. The owner of new or existing equipment or the owner’s authorized agent shall conduct emission tests to determine compliance with applicable rules. For *new equipment*: Unless otherwise specified by the Department, all new equipment shall be tested by the owner or the owner’s authorized agent to determine compliance with applicable emission limits. For *existing equipment*: The director may require the owner or the owner’s authorized agent to conduct an emission test on any equipment if the director has reason to believe that the equipment does not comply with applicable requirements.

#### Federal Regulations

Prepared feeds manufacturing facilities are of the source category affected by 40 Code of Federal Regulations (CFR) Part 63, Subpart DDDDDDD (7D) – *National Emission Standards for Hazardous Air Pollutants for Area Sources (NESHAP): Prepared Feeds Manufacturing*. For information on NESHAP subpart 7D, go to the Prepared Feeds section of Iowa DNR’s [Construction Permitting Materials](#) website (Scroll down to the Prepared Feeds section, see document title *NESHAP 7D Fact Sheet*).

### **3. What are the requirements for fugitive dust?**

You must take reasonable precautions to prevent particulate matter from becoming airborne in quantities sufficient to cause a nuisance and must take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. This is based on the fugitive dust rule located at 567 IAC 23.3(2)“d”, which is included below for the reader’s convenience:

Fugitive Dust: Attainment and Unclassified Areas - A person shall take reasonable precautions to prevent particulate matter from becoming airborne in quantities sufficient to cause a nuisance as defined in Iowa Code section 657.1 when the person allows, causes or permits any materials to be handled, transported or stored or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved roads. Ordinary travel includes routine traffic and road maintenance activities such as scarifying, compacting, transporting road maintenance surfacing material, and scraping of the unpaved public road surface. (the preceding sentence is State Only) All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The public highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not be limited to, the following procedures.

- Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
- Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
- Installation and use of containment or control equipment, to enclose or otherwise limit the emissions

resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizer or limestone.

- Covering, at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
- Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.
- Reducing the speed of vehicles traveling over on-property surfaces as necessary to minimize the generation of airborne dusts.

**4. Am I subject to NESHAP subpart 7D and what does it require?**

For information on NESHAP subpart 7D, including whether you are subject and rule requirements, go to the Prepared Feeds section of Iowa DNR’s [Construction Permitting Materials](#). (Scroll down to the Prepared Feeds section, see document titled *NESHAP 7D Fact Sheet*).

**5. Are feed mills subject to New Source Performance Standard (NSPS) Subpart DD, Standards of Performance for Grain Elevators?**

No, the equipment at a feed mill is not subject to NSPS subpart DD. However, any grain handling equipment on site that is not part of the feed mill operation may be subject to the subpart, for example, equipment at a co-located grain elevator.

**6. What permits are required for feed mills?**

The Department has created a number of documents to help you determine which units at your facility require a permit and which ones may qualify for an exemption. There are guides for facilities that are subject to NESHAP subpart 7D and those that are not subject to the rule. For those subject to NESHAP subpart 7D there are guides for facilities both using and not using the small unit exemption. The documents are located on the Iowa DNR’s [Construction Permitting Materials](#) page (Scroll down to the Prepared Feeds section), and are titled:

- *Permitting Guidance for facilities subject to NESHAP 7D using the Small Unit Exemption*
- *Permitting Guidance for facilities subject to NESHAP 7D not using the Small Unit Exemption*
- *Permitting Guidance for facilities not subject to NESHAP 7D*

**7. How do I apply for a permit?**

The Department highly encourages applicants to use the online application system called Iowa EASY Air to apply for construction permits. Additional information about using the [EASY Air system](#).

First, you will need to set up an account in Easy Air. Instructions for setting up an account are located on the [EASY Air](#) website.

Please direct any system-related comments or questions to the EASY Air Help Desk at [easyair@dnr.iowa.gov](mailto:easyair@dnr.iowa.gov), or by phone to 515-725-9569 or 515-725-9523.

Once you obtain an account, go to your *Dashboard* and click on *Apply for a New Submittal* (you can also do this under the *Submittal* tab and *Start a New Submittal*). Then click on the *Start* button located under *Construction Standard Application*. Follow the directions in the system to complete the application. For assistance completing the application, contact Michael Hermsen, [Michael.Hermsen@dnr.iowa.gov](mailto:Michael.Hermsen@dnr.iowa.gov) (515-725-9577), John Curtin, [John.Curtin@dnr.iowa.gov](mailto:John.Curtin@dnr.iowa.gov) (515-725-9522) or the Permit Help Line (1-877-AIR-IOWA).

You may also apply with a paper application. Paper application forms can be obtained from the DNR’s [Construction Permitting Materials](#) website.

**Complete the following forms:**

- Form FI – Facility Information
  - Form AF – Construction Permit Application Fee
  - Form CP – Application Cover Page
- 1  
|  
| → One of each form

- Form EI – Emission Inventory | per submittal
- Form GHG – Greenhouse Gas Emission Inventory ↓
- Form EU – Emissions Unit Information → One per equipment/operation
- Form EP – Emission Point Information → One per emission point
- Form EC or Excel calculation spreadsheet → One per equipment or submittal
- Form CE - Control Equipment Information ↴
- Form CE1 – Fabric Filter Information | → One form for each Control Form CE2 – Cyclone  
Information ↓ device used

Additional information may be required by the DNR review engineer.

To complete each form, please follow the individual instructions contained on the forms or in the Easy Air System. For the emissions calculations requested on Form EC, please use the calculator provided by the Iowa DNR (available from the DNR’s [Construction Permitting Materials](#) website (scroll down and click on Prepared Feeds)). Complete the spreadsheet for the equipment you are permitting, then print and submit the results along with forms or attach them to the application if using Easy Air. To use the spreadsheet, input the required information, indicated by the highlighted (yellow) cells in the spreadsheet, and your emissions will be automatically calculated. If you are requesting an annual limit on hours or throughput to limit the annual emissions, input these limits as part of the required information in the spreadsheet.

### 8. How do I complete an application?

The purpose of the air construction permit application is to provide complete data about the equipment, emission point(s), and control equipment in your project to help the DNR ensure not only that your facility complies with state and federal laws, but also that the air quality in the State of Iowa is protected. There are several pieces of information the DNR needs to be able to issue a permit; therefore, to ensure your application is complete and can be processed expeditiously, please follow these steps:

#### **Familiarize Yourself with the Application Forms**

Air construction permitting forms can be found on the Iowa DNR’s [Construction Permitting Materials](#) website under the tab “Application Forms.” You will also notice all rules and guidance for air construction permitting can be found on this page.

Below is a list of all the forms that could be included in an air construction permit application. Depending on the nature of the project, choose the forms needed for the equipment you are installing or modifying. Each form includes instructions on how to complete it. Please do not include these instructions with the application. A brief description of the forms is given below.

- **Form AF: Construction Permit Application Fee.** This form identifies the fee required for the review of the air quality construction permit application(s). Be sure to submit the correct fee with the application, because the Department cannot start working on the application until the full amount is submitted.
- **Form FI: Facility Information.** This form identifies your company or facility, equipment location, and personnel involved in the permit application.
- **Form CP: Project Cover Page.** This form provides a description of your company or facility and the purpose for your application and project. Be sure to include a detailed description of what you are requesting in the project, units to be constructed or modified, limits requested, etc.
- **Form EP: Emission Points.** Include in your application a form for *each* emission point in the project. Include the correct stack characteristics (height, diameter, flow, etc.) for each stack.
- **Form EU: Emissions Units.** Include in your application a form for *each* emission unit in your project, even if multiple emission units vent through the same emission point. Make sure to choose the appropriate Form EU for your equipment type.

Also, be sure to include the correct maximum design rate for the unit. This is the maximum rate the unit can process a given material. In addition, include any limits you want to use to reduce the potential emissions of the units.

It is also important to include a detailed process flow diagram for each unit, the process, and the entire plant if it is important. The more information provided, the more efficiently we can process the application.

- **Form CE: Control Equipment.** If applicable, include in your application a form for *each* piece of control equipment or control measure. Choose the CE form for your control equipment or control measure type. Also, be sure to include operating parameters for the equipment on this form.
- **Form EC: Emission Calculations.** This form aids in understanding the processes being permitted and in verifying the methodology of emission calculations. The information on this form is critical because it provides the most accurate description of your potential air emissions. See *How do I calculate emissions?* below for additional guidance on making calculations for feed mills.
- **Form EI: Emission Inventory.** This form provides information on plant-wide total emissions and emissions from each emission point. Total emissions are used to classify the plant into the appropriate categories for the PSD and Title V programs. See *How do I complete the Emission Inventory form?* below for additional information.
- **Form MD: Modeling Determination.** This form helps you determine if modeling will be required for a project. See *What if Air Dispersion Modeling is required?* below for additional information on air dispersion modeling.
- **Form GHG: Greenhouse Gas Emission Inventory.** This form is used to report all greenhouse gas emissions that are part of the project. Form GHG is required for every construction permit application even if the potential greenhouse gas emissions are zero. More information concerning GHG emissions, including emission factors, can be found on the Air Quality Bureau [Greenhouse Gas Emission](#) page.

#### 9. **How do I calculate emissions?**

For the emissions calculations requested on Form EC, please use the calculator provided by the Iowa DNR, available from the DNR's [Construction Permitting Materials](#) website (scroll down and click on the Prepared Feeds tab, see *Emission Calculator for Prepared Feeds Facilities*). Complete the spreadsheet for the equipment you are permitting and print and submit the results along with the EC forms or attach them to the application if using Easy Air. To use the spreadsheet, input the required information, indicated by the highlighted (yellow) cells in the spreadsheet, and your emissions will be automatically calculated. If you are requesting an annual limit on hours or throughput to limit the annual emissions, input these limits as part of the required information in the spreadsheet.

Additional information on the emission factors used in the calculators may be found in the EPA document AP-42, [Grain Elevators and Processes](#)

#### 10. **How do I complete the Emission Inventory form?**

You must include all emission sources on the emission inventory form. This includes permitted sources, exempt sources, indoor venting sources, and grandfathered units. All equipment at the facility that emits any pollutant must be reported on this form. You should report the potential to emit (PTE) for each emission point. If an emission point has a permit, the permit emission limits should be used as the potential emissions. If you are requesting an operating limit, the potential emissions should be based on this limit. If a state standard applies, the PTE should be based on the standard (e.g. 0.1 gr/dscf). Otherwise, calculate emissions based on the maximum capacity of the unit operating 8760 hours per year. Actual emissions should not be reported on this form.

Also, the owner or operator of feed mill equipment shall sum the PTE of the feed mill equipment with the PTE of any associated country grain elevator, country grain terminal elevator or grain terminal elevator.

#### 11. **What if Air Dispersion Modeling is required?**

You should complete Form MD (modeling determination) in the application to determine if modeling is required for a project. For Section 1, remember to sum all of the potential emissions increases and decreases for the project. The potential should be based on any requested permit limits. If you are not requesting limits, the emissions should be evaluated at the maximum capacity of the equipment. This must be done separately for each criteria pollutant (excluding VOC if it is minor project for PSD) that is part of the project separately.

For Section 2 of the determination, you can request the [Availability of Air Resources](#) form from the DNR to obtain your modeled concentration (this will be zero if modeling has not been performed on the facility).

When dispersion modeling is required, the modeling analysis is either conducted by the DNR or is submitted by the applicant for DNR review. All applicants have the option to prepare and submit a complete dispersion modeling analysis according to these guidelines. The DNR will conduct the dispersion modeling when a modeling analysis has not been submitted by the applicant. In either case, please make sure that both Form MI1 (a plot plan) and Form MI2 are complete and provided with the application.

If you have any questions on how to fill out the forms call 1-877-AIR-IOWA to speak to a construction permit engineer. If you have any questions on modeling please call 515-725-8200 and ask to speak to a member of the Air Quality's dispersion modeling team.

## **12. What is included in a final permit?**

Each individual permit will specify the requirements for each stack and emission unit. This can include:

- Stack testing to verify emission rates;
- Conditions to operate, maintain, and inspect equipment;
- Monitoring and record keeping for control equipment parameters;
- Operating limits (e.g. 1 million bushels per 12-month rolling period);
- Record keeping;
- Conditions to minimize emissions

You must maintain all records required by the permit. Record keeping requirements are found in Condition 5 of the permit. Unless specified by a federal regulation, all records as required must be kept on-site for a minimum of two (2) years and shall be available for inspection by the Department. Records shall be legible and maintained in an orderly manner. The records must be available for inspection by the DNR upon request.

## **13. What is the Small Unit Exemption (SUE) and can I use it?**

The small unit exemption is an exemption from obtaining an air construction permit. Any facility, including Title V sources, may use this exemption provided that the affected emission units are not required to be reviewed for compliance with any National Emission Standards for Hazardous Air Pollutants (NESHAP) (discussed below). This exemption is used for an individual emission unit that emits less than the small unit thresholds [specified in 567 IAC 22.1(2)"w"(1)] on a 12-month rolling total basis.

As mentioned, this exemption cannot be used if an emission unit has specific applicable NESHAP requirements. This means for prepared feeds manufacturing facilities that are subject to NESHAP subpart 7D, the small unit exemption cannot be used for certain emission units. Per 567 IAC 22.1(2)"w," the small unit exemption cannot be used if an emission unit emits hazardous air pollutants (HAPs) and is "required to be reviewed for compliance" with a NESHAP. In the past, this has generally been interpreted to mean that if an emission unit was subject to specific NESHAP requirements. Examples are given below:

- **Required to be reviewed:**  
If an emission unit is subject to specific NESHAP requirements, the unit is "required to be reviewed for compliance" with the NESHAP. These NESHAP requirements can include maintenance or work practice standards, recordkeeping or reporting requirements, or operational or emission limitations, among others. An emission unit with these types of requirements is not eligible for the Small Unit Exemption.
- **Not required to be reviewed:**  
If an emission unit is subject to a NESHAP, but has no substantive NESHAP requirements (no work practice, emission limits, record keeping requirements, etc.), then the equipment is not "required to be reviewed for compliance" with the NESHAP. One example of this would be if only notification requirements are required for the unit. In these instances, the Small Unit Exemption may be used.



For additional information on determining if a permit is required or if the small unit exemption can be used, use the permitting guidance referenced above. These documents can be found on the DNR's [Construction Permitting Materials](#) website (Scroll down to the Prepared Feeds section).

For additional information on the small unit exemption, go to the Small Unit Exemptions section of Iowa DNR's [Construction Permit Exemptions](#) website.

If you have any questions on using the small unit exemption, please contact the Department at 1-877-AIR-IOWA for assistance.

#### **14. What is required for the SUE?**

If the Small Unit Exemption is used, you must prepare a Small Unit Exemption Justification Document (EJD) for each unit or group of similar emission units. This must be kept on site. The small unit exemption also requires you to keep records and maintain the equipment to minimize emissions.

The owner or operator must maintain an EJD on site for each emission unit or group of similar emission units to which the small unit exemption is being applied. The EJD contains the information that specifies how the emission units are operated so that the emission thresholds that define a small unit are not exceeded. The EJD must be completed and available for inspection before the unit is constructed. In addition, all requirements and records stated in the EJD must be kept and available for inspection.

Limits, controls, and the resulting emission rates specified in the EJD establish limits on the potential emissions for that emission unit or group of similar emission units. This allows the controls and limits specified in the exemption justification document to be federally enforceable, which means that credit can be taken for use of the controls or limits in applicability determinations for programs such as Title V or PSD.

The exemptions and additional information on the small unit exemption, go to the Small Unit Exemptions section of Iowa DNR's [Construction Permit Exemptions](#) website.

If you have any questions on using the small unit exemption, please contact the Department at 1-877-AIR-IOWA for assistance.

#### **15. If I have more than one facility in the same town, should the facilities be considered one facility for purposes of calculating PTE?**

Multiple facilities (feed mills, grain elevators, bulk gasoline plants, etc.) 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 potential to emit (PTE) calculation purposes, please contact the Department at 1-877-AIR-IOWA for assistance in making this determination.

#### **16. For facilities that identify as having both a grain elevator and feed mill at the same location, is there an easy way to identify which equipment would be covered under the grain elevator and which would be covered under the feed mill?**

Grain elevators by definition handle whole grain. The equipment used to unload, handle, clean, dry, store or load out whole grain at a facility should be classified and permitted or registered as a "grain elevator." The equipment used to process whole grain into animal feed (e.g. hammermills, mixers, and pellet coolers) and the equipment used to handle or store animal feed or other feed ingredients should be permitted as part of the feed mill.

For many co-located grain elevators and feed mills, there should be a clear separation of equipment. However, if a common receiving area is used for both whole grain and other bulk feed ingredients, the facility should include the amount of feed ingredients received in the GrainPTE program as part of its annual throughput for calculating the grain elevator's potential to emit. If this is done, the facility's receiving pits and loadouts, whether for whole grain or feed, will be permitted or registered only as part of the grain elevator. Other equipment at the feed mill that is not

included in the GrainPTE program will need to be evaluated separately to determine applicable permitting requirements.

Finally, a facility with a common receiving area for whole grain and feed ingredients and that has a feed mill that is subject to NESHAP subpart 7D may be required to also have a separate permit for the bulk loadout of feed products due to the additional requirements in that standard. Contact the Construction Permit Helpline at 1-877-AIR-IOWA for additional guidance.

**Disclaimer**

This document, entitled “**Prepared Feeds Manufacturing** 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 January 6, 2021, 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.