

Ethanol Rule Change Implementation Guidance Document

Iowa DNR - Air Quality Bureau

Background: On May 1, 2007, EPA published a final rule that modified the definition of “chemical process plants” as it applies to the Prevention of Significant Deterioration (PSD) permitting program and the Title V operating permits program. The effect of this rule is to increase the PSD permitting threshold for ethanol plants from 100 tons per year of a criteria pollutant to 250 tons per year. The rule also no longer requires ethanol plants to count fugitive emissions of criteria pollutants when determining if they meet or exceed the emissions threshold for PSD or Title V operating permits programs. Fugitive emissions are emissions that can not be reasonably captured and vented to process stacks or vents. These changes will allow some ethanol plants to expand production and emit more criteria and toxic air pollutants without the need for best available control technology analysis or increment analysis until the 250 ton per year threshold of emissions is reached. Modeling to show compliance with NAAQS is required in Iowa.

Effective Date: The final rule was published in the Federal Register on May 1, 2007 and was effective on July 2, 2007 at the federal level.

The DNR proposed to adopt these federal changes into state rules. The notice of intended action was published in the Iowa Administrative Bulletin on August 1, 2007, which was the start of the public comment period. A public hearing was held on September 5, 2007, at 10 a.m. at the Air Quality Bureau. The public comment period ended on September 6, 2007.

After carefully reviewing and responding to all comments received during the public comment period, the DNR asked the Commission to approve adoption of the final amendments at the Commission meeting held on October 1, 2007. The DNR proposed, pursuant to the provisions of Iowa Code section 17A.5(2)"b," that the adopted amendments become effective immediately upon filing with the Administrative Rules Coordinator on October 5, 2007. The Commission approved this action at the October meeting and the rule became effective at the state level on October 5, 2007. The DNR can now issue new or modified air quality construction permits that would utilize this rule change.

Implementation: There are several questions related to the implementation of the new rule for both existing and new ethanol facilities. The following Question/Answer statements are intended to be a guide for facilities that may be affected by this rule change.

(1) Will the rule change be retroactive?

No, under the final state rules, permitted emissions limits and other requirements for existing sources remain in effect and enforceable until the owner or operator applies for and obtains a modified (amended) permit from the DNR.

(2) Can owners or operators of existing facilities that were issued permits under the previous rule to avoid PSD and Title V at the 100 tons/year level now apply for permit modifications to relax emission limits no longer needed to stay below 100 tons/year?

Existing limits and other requirements may be modified only if the DNR agrees to the facility owner's or operator's request for a permit revision. The DNR will revise permits if it can be successfully demonstrated that permit modifications meet all requirements that apply to the facility, and that the permit revisions will not cause or contribute to air quality that would violate the National Ambient Air Quality Standards (NAAQS).

Note: The thresholds for the Title V program will remain at current levels, which is 100 tons per year for the criteria pollutants and 10/25 tons per year for hazardous air pollutants (HAPs).

(3) Should facility owners or operators request to remove or discontinue use of control equipment no longer needed to stay synthetic minor for PSD under the new rule?

Control equipment may still be needed to meet state emission standards or to ensure compliance with the NAAQS. Additionally, removing control equipment could make a source subject to other standards that facility owners or operators had previously requested to avoid, such as National Emission Standards for Hazardous Air Pollutants (NESHAPs). Any request to remove or discontinue the use of control equipment would be evaluated by the DNR on case-by-case basis to ensure that applicable emission and ambient air quality standards will still be met and to identify applicability to other regulatory requirements.

(4) Since fugitive emissions will no longer count for PSD and Title V applicability, can facility owners or operators request that DNR rescind haul road permits that would no longer be needed to remain synthetic minor under the new rule?

Uncontrolled fugitive emissions from haul road traffic may contribute to violations of the PM-10 NAAQS. Before the DNR could consider rescinding a haul road permit, facilities would have to demonstrate through air dispersion modeling that impacts from the haul roads would not cause or contribute to ambient air violations and

permitting requirements are not necessary to ensure predicted compliance with the NAAQS.

New facilities must demonstrate through air dispersion modeling that haul roads would not cause or contribute to ambient air violations, or use Best Management Practices (BMP) to control fugitive dust. Air construction permits will be required to establish federally enforceable limits based on predicted compliance with NAAQS and BMP requirements.

It is important for facilities to be aware that not all fugitives are exempted by the new rule. If the facility has permanent grain storage of 2.5 million bushels or has fossil fuel-fired boilers or process heaters with a capacity combined of more than 250 MM BTUs, then any fugitive emissions associated with those parts of the facility must still be included toward applicability.

- (5) What will be the PSD applicability threshold for ethanol plants that also operate fossil-fuel boilers totaling more than 250 million British thermal units per hour heat input?

This rule only changes the definition of “chemical process plants” and does not modify any other source category. Therefore, the PSD applicability threshold remains at 100 tons/year for “fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units”. As such, the boilers would be treated as a “Nested Facility”, which means the major source status for the boilers would be based on the 100 tons/year threshold including fugitives, and the major source status for the entire facility (all operations including the boilers) would be based on a 250 tons/year threshold.

- (6) For existing facilities that were issued permits under the previous rule to avoid PSD at the 100 tons/year level and now want to expand operations, how many tons/year can facilities increase and still avoid PSD under the new rule?

Generally the DNR would consider projects (expansions) that are less than two years apart to be one entire project that should be evaluated for PSD applicability. These determinations are made on a case-by-case basis and consider a number of factors. The following scenarios are based on a two year timeframe.

Scenario 1: If an existing facility started operations less than two years ago and now applied for an expansion, the initial project plus the expansion would be evaluated at the 250 tons/year threshold for PSD applicability.

Scenario 2: If an existing facility started operations of its last project more than two years ago and is permitted at 99 tons/year for a criteria pollutant the facility could increase an additional 249 tons/year and avoid PSD. From this point on the

facility would be a major stationary source (>250 tons/year) and any future increase would be evaluated for PSD at the significant modification thresholds.

Scenario 3: An existing facility permitted at 99 tons/year for a criteria pollutant could increase an additional 149 tons/year and avoid PSD. The facility would not be a major stationary source (<250 tons/year). The facility could expand another 249 tons/year (one time doubling) if more than two years between projects and still avoid PSD. From this point on the facility would be considered a major stationary source (>250 tons/year) and any future increase would be evaluated for PSD at the significant modification thresholds.

In any of these scenarios, the plant would be subject to Title V and most likely would be major for HAPs making it subject to any applicable NESHAPs.