INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT	STATUS: Effective	POLICY NUMBER: Air-039-NPD	
AGENCY NONRULE POLICY DOCUMENT **SUBJECT:** Permitting of Activities Located at Crop Production Operations	**AUTHORIZED:** Thomas W. Easterly		
	SUPERSEDES: New	**ISSUING OFFICE(S):** Office of Air Quality	
	ORIGINALLY EFFECTIVE: February 13, 2015	**RENEWED/REVISED:** N/A	

Disclaimer: *This Nonrule Policy Document (NPD) is being established by the Indiana Department of Environmental Management (IDEM) consistent with its authority under IC 13-14-1-11.5. It is intended solely to provide guidance and shall be used in conjunction with applicable rules or laws. It does not replace applicable rules and laws, and if it conflicts with these rules or laws, the rules or laws shall control. Pursuant to IC 13-14-1-11.5, this policy will be available for public inspection for at least 45 days prior to presentation to the Indiana Environmental Rules Board, and may be put into effect by IDEM 30 days afterward. IDEM also will submit the policy to the Indiana Register for publication.*

1.0 PURPOSE

The purpose of this NPD is to provide guidance to owners and operators of farming operations that consist of or include crop production activities. The Office of Air Quality developed this NPD to address any confusion that Indiana farmers may have with regard to machines, equipment or processes that are typically determined to be "emission units" within the context of permitting under the federal Clean Air Act and the Indiana Administrative Code.

2.0 SCOPE

This NPD explains what is meant by the "farming operation" exemption in the Indiana Administrative Code. It will also describe whether crop production operations need an operating permit for emission units. Finally, the NPD will set forth certain federal regulations that may apply to certain equipment, whether or not the equipment is used exclusively for farming operations.

3.0 SUMMARY

Machinery, equipment and processes in farming operations may be installed and operated without a construction permit issued by IDEM. However, owners and operators of very large farming operations that are exempt from construction permitting requirements may need a registration or operating permit issued pursuant to 326 IAC 2 *et seq* if the sum of all emissions at the farm exceeds IDEM permit thresholds pursuant to state and federal law. Also, certain emission units used in the farming operations, such as internal combustion engines and boilers, may be subject to federal rules even if a construction permit was not needed and that the air emissions from the entire farming operation does not warrant a registration or operating permit.

4.0 DEFINITIONS

4.1. "Agency" – The Indiana Department of Environmental Management (IDEM).

4.2. "Emissions unit" means any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant under the Clean Air Act (CAA).

4.3 "Farming operations" means that business concerned with the planting, harvesting, and/or marketing of crops and the raising of animals. This does not include nurseries, tree farms, or sod production.

4.4. "Nonrule policy" - The term assigned by the Indiana Department of Environmental Management (IDEM) to those policies identified in IC 13-14-1-11.5 as any policy that: A. Interprets, supplements, or implements a statute or rule; B. Has not been adopted in compliance with IC 4-22-2; C. Is not intended by IDEM to have the effect of law; and D. Does not apply solely to the internal IDEM organization (is not an Administrative Policy).

4.5 "Potential to emit" means the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency. The term does not alter or affect the use of potential to emit for any other purpose under the CAA, (or "capacity factor" as used in Title IV of the CAA) or the regulations promulgated thereunder.

For crop production operations the physical and operational design for purposes of estimating the maximum capacity to emit an air pollutant may be based on the five (5) most recent years of production multiplied by an adjustment factor of 1.2, as described in the November 14, 1995 U.S. EPA guidance document "Calculating Potential to Emit (PTE) and other Guidance for Grain Handling Facilities" (See References Section 7.4B at the end of this document)

4.6 "Source" means an aggregation of one (1) or more stationary emissions units that are located on one (1) piece of property or on contiguous or adjacent properties are owned or operated by the same person (or by persons under common control) and belong to a single major industrial grouping. For purposes of defining a source, two (2) or more contiguous or adjacent properties shall be considered part of a single major industrial grouping if all of the pollutant emitting activities at such contiguous or adjacent properties belong to the same major group, that is, all have the same two (2) digit Standard Industrial Classification (SIC) code as described in the Standard Industrial Classification Manual, 1987. Any stationary source (or group of stationary sources) that supports another source, where both are under common control of the same person (or persons under common control) and are located on contiguous or adjacent properties, shall be considered a support facility and part of the same source regardless of the two (2) digit SIC code for that support facility. A stationary source (or group of stationary sources) is considered a support facility to a source if at least fifty percent (50%) of the output of the support facility is dedicated to the source. A source does not include mobile sources, nonroad engines, or nonroad vehicles.

5.0 ROLES

5.1 Owners and operators of the parts of crop production operations should consult this policy to ensure that the farm is operating in compliance with federal law and state operating permit requirements if applicable.

5.2 The IDEM, Office of Air Quality will use this policy to determine the proper air permitting of the parts of farming operations that do not constitute a CAFO.

6.0 POLICY

6.1 Introduction

Under the current rules in Indiana, machines, equipment or processes that emit air pollutants and that relate solely to farming operations are exempt from the requirement to get a construction permit before installing and operating new equipment. Further, most large crop production operations will not need a registration or air permit for continued operation to be compliant with state and federal law. However, owners and operators of very large crop production operations that are exempt from construction permitting requirements may need a registration or operating permit issued to 326 IAC 2 *et seq* if the sum of all emissions at the farm exceeds permit thresholds as set forth in state and federal law.

6.2 Farming Operations

The term "farming operations" is used in 326 IAC 2-1.1-3(e)(31) and provides an exemption from the requirement to get a construction permit prior to the installation of pollutant emitting equipment for that part of the business concerned with the planting, harvesting, and/or marketing of crops and the raising of animals except for the portion of the operation that constitutes a CAFO as defined in 40 CFR 122.23[1].

6.3 Emission units used in farming operations

IDEM's authority to require permits prior to construction (installation) or for operation extends only to pollutant emitting equipment or processes that are stationary. Mobile sources (engines in automobiles and trucks) and nonroad engines are not included. Combines and tractors are examples of farm equipment that are considered nonroad engines and not subject to air permitting requirements. Other examples of nonroad engines can include pumps and generators if they are designed to be portable or transportable by means of wheels, skids, carrying handles or a dolly. However, internal combustion engines that are used for irrigation equipment, on-site electrical power generation and emergency generators are generally considered stationary and, therefore, could be subject to air permitting or federal regulation.

Other examples of stationary pollutant emission units that are used in crop production farming operations include biomass fired (wood, corn, pellets), oil and natural gas boilers, grain dryers, grain handling equipment, milling operations and natural gas or propane space heaters.

6.4 What constitutes the farm for purposes of permitting

In federal and state air permitting regulatory terms, the farming operation is considered a "source" of emissions. The definition of "source" is found at 326 IAC 1-2-73 (*see* 4.0 Definitions section of this NPD). The definition seems very complex at first reading, but the complexity is designed to deal with industrial sources that can include many different operations with the goal of creating a common product, i.e. integrated structural steel operations. With regard to large farming operations, however, the main thing to determine is whether the plots of land are owned and controlled by the same entity or entities and whether the farming operations are on contiguous or adjacent land. Keep in mind that the term "adjacent" means "nearby" and the term "nearby" does not require the parcels of land to touch; only that they be in close proximity to each other. U.S. EPA guidance suggests that the physical proximity that determines "adjacency" can expand to larger distances if the activities at the different sites are functionally interrelated. In terms of SIC codes[2], two operations under common ownership and control that have different SIC codes can still be combined as one source because one of the operations is dependent on the other operation as a support facility. Therefore a farm (or group of farms) could be considered a support facility to another small livestock operation (or a CAFO) if at least fifty percent (50%) of the output of that farm or group of farms is dedicated to the adjacent livestock operation or CAFO. Due to the fungible nature of feed crops and the short-term nature of agricultural supply contracts, it is unlikely that adjacent farming operations that are under different ownership or control will be considered one "source" for purposes of permitting.

Since source determinations can have an impact on whether a permit application needs to be submitted, OAQ staff will, upon request, review source determination information prior to an

[1] IDEM has developed a separate nonrule policy document to address air permitting requirements for CAFOs. *See* Permitting of Activities Located at Livestock Production Operations including Concentrated Animal Feeding Operations, Air-038-NPD

[2] Soybean, wheat, corn and hay farming operations fall within the 01 SIC code and beef cattle, dairy cattle, hog and pig, egg production, broilers, and turkey operations fall within the 02 SIC code.

application being submitted using the most recent U.S. EPA and OAQ guidance as well as relevant court decisions.

6.5 Permits to operate

IDEM expects the vast majority of farms will not need registrations or permits for air emissions because the potential to emit air pollutants, as determined by USEPA and IDEM guidance, will be less than the emission levels that trigger air permitting. Based on long-standing USEPA guidance, crop production operations may base potential to emit estimates on historical production levels. (See "potential to emit" in the Definitions Section 4.5) Some farms, especially CAFOs that include digesters with engines and/or flares, because of activities and operations conducted on the farm, or because of their overall size, may have emissions greater than the IDEM permitting thresholds.

IDEM, in conjunction with agricultural trade associations, have attempted to identify the type of farms that may be large enough to require a registration or permit. By conducting surveys of farm capacities and production levels and estimating emissions from those activities using standard USEPA emission calculation methods, IDEM and the trade associations are able to provide some general guidelines for the kinds of farms that may need permits. If your farm has lower capacities or production levels compared to the farms in the examples below, it is highly unlikely your farm would need a registration or permit. If your farm is similar to or larger than the farms in the examples, you should conduct a closer evaluation of whether a permit or registration is required.

The two pollutants emitted by farms that may trigger a registration or permit are nitrogen oxides (NOx) and particulate matter (PM). NOx is a by-product of burning a fuel, and is typically emitted by stationary engines such as irrigation engines or grain dryers. If a farm's potential to emit NOx is greater than 10 tons per year, a registration from IDEM is needed. PM is typically generated by dust creating activities such as grain handling or production vehicle traffic on unpaved roads and lots. For this calculation, farms do not include PM which may originate from tillage or harvesting. A registration is required if the potential to emit PM is greater than 5 tons per year. Permits from IDEM are required only when NOx or PM potential to emit exceed 25 tons per year.

In the crop production example below, the critical operations are irrigation engines, which are significant sources of NOx emissions, and grain handling (receiving, drying, storage, and shipping) which is a significant source of PM emissions. The table below provides an example farm that has 10 irrigation engines with total capacity of 1100 horsepower. The farm produces 375,000 bushels of corn. The NOx emissions and PM emissions are just below or right at the IDEM registration levels. Any farm with capacity and production well below these levels would be highly unlikely to need a registration or permit. A farm above or even slightly below these production levels should conduct a more thorough evaluation to determine if a registration or permit is required.

Crop production (grain farm)[3]

Activity	**Context – Capacity and historic utilization**	**Critical Pollutant**	**Emission rate (with 20% upward adjustment)**
Irrigation engines at a crop farm - diesel	1100 hp total capacity at about 450 hours per year	NOx PM	9.5 ton/year 0.7 ton/year

[3] A crop production operation that also has livestock production activities should also consult the IDEM nonrule policy document AIR-038-NPD, Permitting of Activities Located at Livestock Production Operations including Concentrated Animal Feeding Operations.

Activity	Context – Capacity and historic utilization	Critical Pollutant	Emission rate (with 20% upward adjustment)
Grain drying - natural gas	Approximately 4 million cubic feet natural gas consumed to dry 375,000 bushels	NOx	0.2 ton/year
Grain handling - multiple steps	Approximately 375,000 bushels grain received, dried, stored, and shipped	PM	4 ton/year
Vehicle traffic on unpaved roads and lots	250 trips per year of grain hauling; approximately 1000 feet distance from public road to unloading station	PM	0.3 ton/year

6.6 Federal regulations

While the vast majority of farming operations will not need a registration or other type of operating permit, certain emission units on farms could still be subject to federal regulations. Two types of emission units that can be subject to federal regulation are boilers and stationary internal combustion engines.

The National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, subpart ZZZZ (RICE NESHAP) limits emissions of toxic air pollutants from stationary reciprocating internal combustion engines. A general overview of the federal requirements can be found at: http://www.epa.gov/ttn/atw/icengines/index.html and http://www.epa.gov/ttn/atw/icengines/docs/20130919complianceinfo.pdf.

The National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers, 40 CFR 63, subpart JJJJJ (Boiler MACT) limits emissions of toxic air pollutants from industrial, commercial, and institutional boilers. A general overview of the federal requirements can be found at: http://www.epa.gov/ttn/atw/boiler/boilerpg.html. A summary of the requirements can be found at: http://www.epa.gov/ttn/atw/boiler/imptools/areaboilerbrochure.pdf.

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, subpart IIII (Compression Ignition ICE NSPS) limits emissions of Non-methane Hydrocarbons, NOx, Hydrocarbons, Carbon Monoxide and Particulate Matter. A navigation tool to help with applicability determinations is available at: http://www.epa.gov/ttn/atw/ice/quiz.html. A question and answer document is available at: http://www.epa.gov/ttn/atw/icengines/docs/20120717riceqaupdate.pdf.

Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60, subpart JJJJ (Spark Ignition ICE NSPS) limits emissions of NOx, Carbon Monoxide and Volatile Organic Compounds. A navigation tool to help with applicability determinations is available at: http://www.epa.gov/ttn/atw/ice/quiz.html. A question and answer document is available at: http://www.epa.gov/ttn/atw/icengines/docs/20120717riceqaupdate.pdf.

Additionally, the U.S. EPA issued a guidance document in February 2014 to specifically address farm engines that may be subject to the NSPS Subparts IIII or JJJJ and the RICE NESHAP Subpart ZZZZ called, "Overview of Reciprocating Internal Combustion Engine (RICE) NESHAP Requirements for Stationary Agricultural Engines" found at:

http://www.epa.gov/ttn/atw/icengines/docs/20140205agenginecomplianceinfo.pdf.

General implementation information for stationary internal combustion engines rules and requirements can be found at: http://www.epa.gov/ttn/atw/icengines/imp.html. There is a section titled "Summary of Requirements" that includes links to spreadsheets that describe the requirements for the three federal rules that apply to stationary ICE engines.

6.7 Assistance

For additional information, owners or operators of a crop production farming operation may also contact IDEM's Compliance and Technical Assistance Program (CTAP) for free, confidential compliance and technical assistance. CTAP is available at 800-988-7901 (in-state only) or 317-232-8172.

Additionally, an owner or operator of a crop production farming operation can contact OAQ Permits Branch by calling 317-234-5132 to request a pre-application meeting to discuss whether your farming operation requires a registration or operating permit.

IDEM has developed some instructional guidance and example calculations for emission units and activities that are commonly found in farming operations. Additionally, the guidance explains the basis and approach for what IDEM has determined are the operational constraints, such as seasonal limitations and maximum crop yields that would reduce the potential to emit in farming operations in Indiana. These documents will be available on the Office of Air Quality's website.

7.0 REFERENCES

7.1. Federal Laws or Rules:

A. 40 CFR 122.23 (definition of CAFO)

B. 40 CFR 63.6580 *et seq.* (RICE NESHAP)

C. 40 CFR 63.7480 *et seq.* (Boiler MACT)

D. 40 CFR 60.4200 *et seq.* (Compression Ignition ICE NSPS)

E. 40 CFR 60.4230 *et seq.* (Spark Ignition ICE NSPS)

7.2. Indiana Administrative Codes:

A. 326 IAC 2 *et seq* (Permit Review Rules)

B. 326 IAC 2-1.1-3(e)(31)

C. 326 IAC 2-5.5-1

D. 326 IAC 2-8 *et seq* (Federally Enforceable State Operating Permit Program Rules)

E. 326 IAC 2-7 *et seq* (Part 70 Permit Program)

F. 326 IAC 1-2-73

7.4. Agency Policies:

A. IDEM
Permitting of Activities Located at Concentrated Animal Feeding Operations, Air-038-NPD, http://www.in.gov/idem/4694.htm#air

2. Memorandum from John S. Seitz to U.S. EPA Regions I-X Air Directors, Calculating Potential to Emit (PTE) for Emergency Generators, dated September 6, 1995, http://www.epa.gov/ttn/caaa/t5/memoranda/emgen.pdf

3. Stationary Internal Combustion Engines- Basic Info
http://www.epa.gov/ttn/atw/icengines/index.html

4. Stationary Internal Combustion Engines-How to Comply
http://www.epa.gov/ttn/atw/icengines/docs/20130919complianceinfo.pdf

5. Stationary Internal Combustion Engines – NSPS Navigation Tool
http://www.epa.gov/ttn/atw/ice/quiz.html

6. Stationary Internal Combustion Engines – NSPS Question and Answer Document
http://www.epa.gov/ttn/atw/icengines/docs/20120717riceqaupdate.pdf

7. Stationary Internal Combustion Engines – NSPS and NESHAP General Rule Implementation Document including Summary of Requirement spreadsheets
http://www.epa.gov/ttn/atw/icengines/imp.html

8. Boiler MACT-General Overview
http://www.epa.gov/ttn/atw/boiler/boilerpg.html

9. Boiler MACT- Summary of Requirements
http://www.epa.gov/ttn/atw/boiler/imptools/areaboilerbrochure.pdf

10. Overview of Reciprocating Internal Combustion Engine (RICE) NESHAP Requirements for Stationary Agricultural Engines
http://www.epa.gov/ttn/atw/icengines/docs/20140205agenginecomplianceinfo.pdf

8.0 SIGNATURES

Thomas W. Easterly, Commissioner
Indiana Department of Environmental Management

11/25/14
Date

Keith Baugues, Assistant Commissioner
Office of Air Quality

11/13/14
Date

Carol S. Comer, Assistant Commissioner
Office of Legal Counsel and Criminal Investigations

11/14/2014
Date

This policy is consistent with Agency requirements.

Quality Assurance Program, Planning and Assessment
Indiana Department of Environmental Management

11-26-14
Date