



# Indiana Department of Environmental Management

*We Protect Hoosiers and Our Environment.*

100 N. Senate Avenue • Indianapolis, IN 46204

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**Michael R. Pence**  
Governor

**Carol S. Comer**  
Commissioner

## NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

Preliminary Findings Regarding a  
Federally Enforceable State Operating Permit (FESOP)  
for Darling Ingredients Inc. in Greene County

FESOP No.: F055-37321-00008

The Indiana Department of Environmental Management (IDEM) has received an application from Darling Ingredients Inc. located at 7358 South Griffin Road, Newberry, IN 47449 for a transition of its Part 70 Operating Permit, issued on October 16, 2013, to a FESOP. If approved by IDEM's Office of Air Quality (OAQ), this proposed FESOP would allow Darling Ingredients Inc. to continue to operate its existing source.

This draft FESOP does not contain any new equipment that would emit air pollutants. This notice fulfills the public notice procedures to which the permit is subject. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow for these changes.

A copy of the permit application and IDEM's preliminary findings are available at:

Bloomfield-Eastern Greene County Public Library  
125 South Franklin Street  
Bloomfield, IN 47424

A copy of the preliminary findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>.

### How can you participate in this process?

The date that this notice is published in a newspaper marks the beginning of a 30-day public comment period. If the 30<sup>th</sup> day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the **air pollution impact** of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM's mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number F055-37321-00008 in all correspondence.

**Comments should be sent to:**

Joshua Levering  
IDEM, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(800) 451-6027, ask for extension 4-6543  
Or dial directly: (317) 234-6543  
Fax: (317) 232-6749 attn: Joshua Levering  
E-mail: JLeverin@idem.IN.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

**What will happen after IDEM makes a decision?**

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, and the IDEM public file room on the 12<sup>th</sup> floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Joshua Levering or my staff at the above address.



Jason R. Krawczyk, Section Chief  
Permits Branch  
Office of Air Quality



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## DRAFT

# Federally Enforceable State Operating Permit OFFICE OF AIR QUALITY

**Darling Ingredients Inc.  
7358 South Griffin Road  
Newberry, Indiana 47449**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

**The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.**

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No.: F055-37321-00008	
Issued by:  Jason R. Krawczyk, Section Chief Permits Branch Office of Air Quality	Issuance Date:  Expiration Date:

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## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-8-3(b)]

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The Permittee owns and operates a stationary animal and agricultural byproducts recycling operation.

Source Address:	7358 South Griffin Road, Newberry, Indiana 47449
General Source Phone Number:	(812) 659-3390
SIC Code:	2077 (Animal and Marine Fats and Oils)
County Location:	Greene
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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This stationary source consists of the following emission units and pollution control devices:

- (a) Blood meal making process, constructed in 1968 (except Dupps dryer, constructed in 2014), with a maximum production rate of 1.0 ton of blood meal per hour, controlled by a series of 3 scrubbers with sequence as Blood Centrifuge Venturi Scrubber (Venturi1C), Packed Bed Scrubber (Packed 1C) and In-Room Air Scrubber (Room 32B), exhausting to Stack RAS-2 and consisting of the following:

- (I) Blood receiving
- (II) Coagulator
- (III) Centrifuge
- (IV) One (1) steam heated dryer, identified as Dupps dryer, constructed in 2014, with a maximum production rate of 1.0 ton of blood meal per hour and exhausting to Stack RAS-2.
- (V) Shell and tube Condenser
- (VI) Screen
- (VII) Storage

- (b) Feather meal making process, constructed in 1968, with a maximum production rate of 2.88 tons of feather meal per hour, controlled by a series of 3 scrubbers with sequence as Feather Plant Venturi Scrubber (Venturi10B), Feather Plant Packed Bed Scrubber (Packed 10B) and In-Room Air Scrubber (Room 32B), exhausting to Stack RAS-2, and consisting of the following:

- (I) Feather receiving and spreader
- (II) Hydrolizer
- (III) Feather Press
- (IV) Feather Dryer, identified as Feather Dryer
- (V) Shell and tube Condensers and cooling tower
- (VI) Hammermill

- (c) Poultry/Fat/Bone meal making process, constructed in 1968, with a maximum production rate of 10.49 tons of Poultry/Fat/Bone meal per hour, controlled by series of 3 scrubbers with sequence as Meat Plant Venturi Scrubber (Venturi 3A), Meat Plant Packed Bed Scrubber (Packed 3A) and Meat Plant In-Room Air Scrubber (Room 32A), exhausting to Stack RAS-1, and consisting of the following:
- (I) Two (2) Grinders
  - (II) Two (2) Cookers (Cooker A and Cooker B)
  - (III) Drainers
  - (IV) Presses
  - (V) Screens
  - (VI) Centrifuges
  - (VII) Shell and tube Condensers and cooling tower
- (d) Four (4) natural gas-fired boilers, identified as 05, 06, 07, and 08, constructed in 2008, used for supplying heat in Feather meal, Poultry/Fat/Bone meal and Blood Meal making processes, each is capable of burning processed fats and No. 2 fuel oil as backup fuels. Each boiler 05, 06, and 07 has a heat input capacity of 50.2 million British thermal units per hour (MMBtu/hr), exhausting to stacks H, I, and J respectively, and boiler 08 has a heat input capacity of 33.746 MMBtu/hr, exhausting to stack K.
- Note:** Boilers 05, 06, 07, and 08 are considered gas-fired boilers as defined in 40 CFR 63.11237. Therefore, the source is exempt from the requirements of 40 CFR 63, Subpart JJJJJJ, pursuant to 40 CFR 63.11195(e). At any time the boilers no longer meet the definition of gas-fired boiler, as defined in 40 CFR 63.11237, the source shall comply with the applicable requirements of 40 CFR 63, Subpart JJJJJJ.
- (e) Material storage and handling facilities including:
- (1) Three (3) 250 ton capacity enclosed silos, used for storing meat meal, feather meal, and poultry/fat/bone meal, with five (5) screw conveyors for material handling, and
  - (2) One (1) 30 ton capacity enclosed silo, used for storing blood meal, with three (3) screw conveyor for material handling.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1(21).

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

## SECTION B GENERAL CONDITIONS

### B.1 Definitions [326 IAC 2-8-1]

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

### B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

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- (a) This permit, F055-37321-00008, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

### B.3 Term of Conditions [326 IAC 2-1.1-9.5]

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Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

### B.4 Enforceability [326 IAC 2-8-6][IC 13-17-12]

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Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

### B.5 Severability [326 IAC 2-8-4(4)]

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The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

### B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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This permit does not convey any property rights of any sort or any exclusive privilege.

### B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

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- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

### B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

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- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

- (1) it contains a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1), and
  - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
  - (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

**B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]**

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- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
  - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]**

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IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

**B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]**

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(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

**B.12 Emergency Provisions [326 IAC 2-8-12]**

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly

signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or  
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)  
Facsimile Number: 317-233-6865

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
  - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
    - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
    - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to F055-37321-00008 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination  
[326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

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- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
  - (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
  - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
  - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the

document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (c) without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)(1) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(1) and (c).

- (b) Emission Trades [326 IAC 2-8-15(b)]  
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(b).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]**

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- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:  
  
Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

**B.22 Annual Fee Payment [326 IAC 2-7-19][326 IAC 2-8-4(6)][326 IAC 2-8-16][326 IAC 2-1.1-7]**

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- (a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

**B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314][326 IAC 1-1-6]**

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For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

**SECTION C SOURCE OPERATION CONDITIONS**

Entire Source

**Emission Limitations and Standards [326 IAC 2-8-4(1)]**

**C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]**

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

**C.2 Overall Source Limit [326 IAC 2-8]**

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

**C.3 Opacity [326 IAC 5-1]**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A,

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Open Burning [326 IAC 4-1][IC 13-17-9]

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The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2][326 IAC 9-1-2]

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The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

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The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.7 Stack Height [326 IAC 1-7]

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The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 Asbestos Abatement Projects [326 IAC 14-10][326 IAC 18][40 CFR 61, Subpart M]

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- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

### **Testing Requirements [326 IAC 2-8-4(3)]**

#### **C.9 Performance Testing [326 IAC 3-6]**

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- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

### **Compliance Requirements [326 IAC 2-1.1-11]**

#### **C.10 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

### **Compliance Monitoring Requirements [326 IAC 2-8-4(1)][326 IAC 2-8-5(a)(1)]**

#### **C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]**

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- (a) For new units:  
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.
- (b) For existing units:  
Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance to begin such monitoring. If, due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

#### **C.12 Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]**

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- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

### **Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]**

#### **C.13 Emergency Reduction Plans [326 IAC 1-5-2][326 IAC 1-5-3]**

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Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

no later than ninety (90) days after the date of issuance of this permit.

The ERP does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-8-4][40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.15 Response to Excursions or Exceedances [326 IAC 2-8-4][326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system);  
or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records; and/or
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

**C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

**C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]**

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:
  - (AA) All calibration and maintenance records.
  - (BB) All original strip chart recordings for continuous monitoring instrumentation.
  - (CC) Copies of all reports required by the FESOP.Records of required monitoring information include the following, where applicable:
  - (AA) The date, place, as defined in this permit, and time of sampling or measurements.
  - (BB) The dates analyses were performed.
  - (CC) The company or entity that performed the analyses.
  - (DD) The analytical techniques or methods used.
  - (EE) The results of such analyses.
  - (FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the

remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

**C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)][326 IAC 2-1.1-11]**

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- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

**Stratospheric Ozone Protection**

**C.19 Compliance with 40 CFR 82 and 326 IAC 22-1**

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Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

**SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

- (a) Blood meal making process, constructed in 1968 (except Dupps dryer, constructed in 2014), with a maximum production rate of 1.0 ton of blood meal per hour, controlled by a series of 3 scrubbers with sequence as Blood Centrifuge Venturi Scrubber (Venturi1C), Packed Bed Scrubber (Packed 1C) and In-Room Air Scrubber (Room 32B), exhausting to Stack RAS-2 and consisting of the following:
- (I) Blood receiving
  - (II) Coagulator
  - (III) Centrifuge
  - (IV) One (1) steam heated dryer, identified as Dupps dryer, constructed in 2014, with a maximum production rate of 1.0 ton of blood meal per hour and exhausting to Stack RAS-2.
  - (V) Shell and tube Condenser
  - (VI) Screen
  - (VII) Storage
- (b) Feather meal making process, constructed in 1968, with a maximum production rate of 2.88 tons of feather meal per hour, controlled by a series of 3 scrubbers with sequence as Feather Plant Venturi Scrubber (Venturi10B), Feather Plant Packed Bed Scrubber (Packed 10B) and In-Room Air Scrubber (Room 32B), exhausting to Stack RAS-2, and consisting of the following:
- (I) Feather receiving and spreader
  - (II) Hydrolizer
  - (III) Feather Press
  - (IV) Feather Dryer, identified as Feather Dryer
  - (V) Shell and tube Condensers and cooling tower
  - (VI) Hammermill
- (c) Poultry/Fat/Bone meal making process, constructed in 1968, with a maximum production rate of 10.49 tons of Poultry/Fat/Bone meal per hour, controlled by series of 3 scrubbers with sequence as Meat Plant Venturi Scrubber (Venturi 3A), Meat Plant Packed Bed Scrubber (Packed 3A) and Meat Plant In-Room Air Scrubber (Room 32A), exhausting to Stack RAS-1, and consisting of the following:
- (I) Two (2) Grinders
  - (II) Two (2) Cookers (Cooker A and Cooker B)
  - (III) Drainers
  - (IV) Presses
  - (V) Screens
  - (VI) Centrifuges
  - (VII) Shell and tube Condensers and cooling tower
- (d) Four (4) natural gas-fired boilers, identified as 05, 06, 07, and 08, constructed in 2008, used for supplying heat in Feather meal, Poultry/Fat/Bone meal and Blood Meal making processes, each is capable of burning processed fats and No. 2 fuel oil as backup fuels. Each boiler 05, 06, and 07 has a heat input capacity of 50.2 million British thermal units per hour (MMBtu/hr), exhausting to stacks H, I, and J respectively, and boiler 08 has a heat input capacity of 33.746 MMBtu/hr, exhausting to stack K.

**Note:** Boilers 05, 06, 07, and 08 are considered gas-fired boilers as defined in 40 CFR 63.11237. Therefore, the source is exempt from the requirements of 40 CFR 63, Subpart JJJJJ, pursuant to 40 CFR 63.11195(e). At any time the boilers no longer meet the definition of gas-fired boiler, as defined in 40 CFR 63.11237, the source shall comply with the applicable requirements of 40 CFR 63, Subpart JJJJJ.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

#### D.1.1 FESOP and PSD Minor Limits [326 IAC 2-8-4][326 IAC 2-2]

In order to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following limits:

- (a) The sulfur content of the No. 2 fuel oil combusted in boilers 05, 06, 07 and 08, shall not exceed 0.05% by weight.
- (b) The combined NO<sub>x</sub> emissions from combusting natural gas, No. 2 fuel oil, and processed fats in boilers 05, 06, 07, and 08, shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit SO<sub>2</sub> and NO<sub>x</sub> from all other emission units at this source, shall limit the source-wide total potential to emit of SO<sub>2</sub> and NO<sub>x</sub> to less than 100 tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

#### D.1.2 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), the Permittee shall comply with the following:

- (a) The sulfur dioxide (SO<sub>2</sub>) emissions from the boilers (05 through 08) shall each not exceed five tenths (0.5) pounds per MMBtu when combusting distillate oil.
- (b) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

#### D.1.3 Particulate Matter (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from boiler 05, boiler 06, boiler 07, and boiler 08, each, shall be limited to 0.28 lb/MMBtu.

#### D.1.4 Particulate Matter (PM) [326 IAC 6-3-2(e)]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate matter (PM) emissions from the Blood Meal, Feather Meal, and Poultry/Fat/Bone Meal making processes shall not exceed the emission limits shown in the table below:

Operation	P (tons/hr)	Allowable PM E (lbs/hr)
Blood Meal	1.00	4.10
Feather Meal	2.88	8.33
Poultry/Fat/Bone Meal	10.49	19.80

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

Where: E = rate of emission in pounds per hour; and  
 P = process weight rate in tons per hour

**D.1.5 Preventive Maintenance Plan (PMP) [326 IAC 2-8-4(9)]**

A Preventive Maintenance Plan (PMP) is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements [326 IAC 2-8-4(1)]**

**D.1.6 Testing Requirements [326 IAC 2-1.1-11]**

In order to verify the uncontrolled emission rates of PM, PM10, and PM2.5, not later than 180 days after the issuance of FESOP No. F055-37321-00008, the Permittee shall perform one-time uncontrolled PM, PM10, and PM2.5 testing of the Blood Meal making, Feather meal making, and Poultry/Fat/Bone meal making processes, utilizing methods approved by the commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM<sub>10</sub> and PM<sub>2.5</sub> includes filterable and condensable PM.

**D.1.7 NOx Emissions**

In order to assure compliance with Condition D.1.1(b), the Permittee shall determine NOx emissions according to the following formula:

Nitrogen Oxides Emission Calculation

$$N = \frac{G(E_G) + O(E_O) + P(E_P)}{2,000 \text{ lbs/ton}}$$

where:

- N = tons of nitrogen oxides emissions for 12 month consecutive period
- G = million cubic feet of natural gas used in previous 12 months
- O = gallons of No. 2 fuel oil used in previous 12 months
- P = gallons of processed fats used for the last 12 months

- E<sub>G</sub> = 100 pounds/million cubic feet of natural gas
- E<sub>O</sub> = 20 pounds/1000 gallons of No. 2 fuel oil
- E<sub>P</sub> = 19.88 pounds/1000 gallons of processed fats

**D.1.8 Sulfur Dioxide Emissions and Sulfur Content**

In order to assure compliance with Conditions D.1.1(a) and D.1.2(a), the sulfur content of the No.2 fuel oil shall be determined using one of the following options:

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five tenths (0.5) pounds per million British thermal units heat input when combusting No. 2 fuel oil by:
  - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;
  - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
    - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
    - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from a boiler using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

### **Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

#### **D.1.9 Record Keeping Requirements**

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- (a) To document the compliance status of Conditions D.1.1(a), D.1.1(b), and D.1.2(a), the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the Conditions D.1.1(a), D.1.1(b), and D.1.2(a).
  - (1) Calendar dates covered in the compliance determination period;
  - (2) The actual No. 2 fuel oil usage, natural gas usage, and actual processed fats usage, at all boilers; and
  - (3) The actual sulfur content of the No. 2 fuel oil usage on a thirty (30) day average.

If the fuel supplier certification is used to demonstrate compliance the following shall be maintained:

    - (A) Fuel supplier certifications;
    - (B) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and
    - (C) The name of the fuel supplier.
  - (4) The actual combined NO<sub>x</sub> emissions from combusting natural gas, No. 2 fuel oil, and processed fats in boilers 05, 06, 07, and 08.
- (b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

#### D.1.10 Reporting Requirements

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A quarterly summary of the information to document the compliance status with Condition D.1.1(b) shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by these conditions. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**SECTION E.1**

**NSPS**

**Emissions Unit Description:**

- (d) Four (4) natural gas-fired boilers, identified as 05, 06, 07, and 08, constructed in 2008, used for supplying heat in Feather meal, Poultry/Fat/Bone meal and Blood Meal making processes, each is capable of burning processed fats and No. 2 fuel oil as backup fuels. Each boiler 05, 06, and 07 has a heat input capacity of 50.2 million British thermal units per hour (MMBtu/hr), exhausting to stacks H, I, and J respectively, and boiler 08 has a heat input capacity of 33.746 MMBtu/hr, exhausting to stack K.

**Note:** Boilers 05, 06, 07, and 08 are considered gas-fired boilers as defined in 40 CFR 63.11237. Therefore, the source is exempt from the requirements of 40 CFR 63, Subpart JJJJJJ, pursuant to 40 CFR 63.11195(e). At any time the boilers no longer meet the definition of gas-fired boiler, as defined in 40 CFR 63.11237, the source shall comply with the applicable requirements of 40 CFR 63, Subpart JJJJJJ.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

**New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4(1)]**

**E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1][40 CFR Part 60, Subpart A]**

- (a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission units listed above, except as otherwise specified in 40 CFR Part 60, Subpart Dc.

- (b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

**E.1.2 New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units NSPS [326 IAC 12][40 CFR Part 60, Subpart Dc]**

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart Dc (included as Attachment A to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission units listed above:

- (1) 40 CFR 60.40c
- (2) 40 CFR 60.41c
- (3) 40 CFR 60.42c(d), (h)(1), (i)
- (4) 40 CFR 60.43c(c), (d), (e)(1) or (2)
- (5) 40 CFR 60.44c(g), (h)
- (6) 40 CFR 60.45c(a), (b)
- (7) 40 CFR 60.46c(e)
- (8) 40 CFR 60.47c(f)
- (9) 40 CFR 60.48c(a), (c), (d), (e)(1), (2), (3), (11), (f)(1), (g)(1), (2), (i), (j)

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
CERTIFICATION**

Source Name: Darling Ingredients Inc.  
Source Address: 7358 South Griffin Road, Newberry, Indiana 47449  
FESOP Permit No.: F055-37321-00008

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify) \_\_\_\_\_
- Report (specify) \_\_\_\_\_
- Notification (specify) \_\_\_\_\_
- Affidavit (specify) \_\_\_\_\_
- Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: (317) 233-0178  
Fax: (317) 233-6865**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
EMERGENCY OCCURRENCE REPORT**

Source Name: Darling Ingredients Inc.  
Source Address: 7358 South Griffin Road, Newberry, Indiana 47449  
FESOP Permit No.: F055-37321-00008

**This form consists of 2 pages**

**Page 1 of 2**

- |  |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none"><li>• The Permittee must notify the Office of Air Quality (OAQ), within four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and</li><li>• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-8-12</li></ul> |
|--|

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE AND ENFORCEMENT BRANCH**

**FESOP Quarterly Report**

Source Name: Darling Ingredients Inc.  
 Source Address: 7358 South Griffin Road, Newberry, Indiana 47449  
 FESOP Permit No.: F055-37321-00008  
 Facility: Boilers 05, 06, 07, and 08  
 Parameter: NOx emissions  
 Limit: The combined NO<sub>x</sub> emissions from combusting natural gas, No. 2 fuel oil, and processed fats in boilers 05, 06, 07, and 08, shall not exceed 99.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

Month	Column 1	Column 2	Column 1 + Column 2
	NOx Emissions (Tons) This Month	NOx Emissions (Tons) Previous 11 Months	NOx Emissions (Tons) 12 Month Total

- No deviation occurred in this month.
- Deviation/s occurred in this month.  
 Deviation has been reported on \_\_\_\_\_

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Phone: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Darling Ingredients Inc.  
Source Address: 7358 South Griffin Road, Newberry, Indiana 47449  
FESOP Permit No.: F055-37321-00008

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

<p>This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C- General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

## Attachment A

### Federally Enforceable State Operating Permit (FESOP) No: F055-37321-00008

[Downloaded from the eCFR on May 13, 2013]

#### Electronic Code of Federal Regulations

#### Title 40: Protection of Environment

#### PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

#### Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

#### § 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, § 60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO<sub>2</sub>) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§ 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in § 60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under § 60.14.

(e) Affected facilities (i.e. heat recovery steam generators and fuel heaters) that are associated with stationary combustion turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators, fuel heaters, and other affected facilities that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator, fuel heater, or other affected facility is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(f) Any affected facility that meets the applicability requirements of and is subject to subpart AAAA or subpart CCCC of this part is not subject to this subpart.

(g) Any facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not subject to this subpart.

(h) Affected facilities that also meet the applicability requirements under subpart J or subpart Ja of this part are subject to the PM and NO<sub>x</sub> standards under this subpart and the SO<sub>2</sub> standards under subpart J or subpart Ja of this part, as applicable.

(i) Temporary boilers are not subject to this subpart.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

**§ 60.41c Definitions.**

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

*Annual capacity factor* means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

*Coal* means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see § 60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

*Coal refuse* means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

*Combined cycle system* means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

*Combustion research* means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit ( *i.e.* , the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

*Conventional technology* means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

*Distillate oil* means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see § 60.17), diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 60.17), kerosine, as defined by the American Society of Testing and Materials in ASTM D3699 (incorporated by reference, see § 60.17), biodiesel as defined by the American Society of Testing and Materials in ASTM D6751 (incorporated by reference, see § 60.17), or biodiesel blends as defined by the American Society of Testing and Materials in ASTM D7467 (incorporated by reference, see § 60.17).

*Dry flue gas desulfurization technology* means a SO<sub>2</sub> control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

*Duct burner* means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

*Emerging technology* means any SO<sub>2</sub> control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under § 60.48c(a)(4).

*Federally enforceable* means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

*Fluidized bed combustion technology* means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

*Fuel pretreatment* means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

*Heat input* means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

*Heat transfer medium* means any material that is used to transfer heat from one point to another point.

*Maximum design heat input capacity* means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

*Natural gas* means:

- (1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or
- (2) Liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see § 60.17); or
- (3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

*Noncontinental area* means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

*Oil* means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

*Potential sulfur dioxide emission rate* means the theoretical SO<sub>2</sub> emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

*Process heater* means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

*Residual oil* means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see § 60.17).

*Steam generating unit* means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

*Steam generating unit operating day* means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

*Temporary boiler* means a steam generating unit that combusts natural gas or distillate oil with a potential SO<sub>2</sub> emissions rate no greater than 26 ng/J (0.060 lb/MMBtu), and the unit is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A steam generating unit is not a temporary boiler if any one of the following conditions exists:

- (1) The equipment is attached to a foundation.
- (2) The steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.
- (3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.
- (4) The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.

*Wet flue gas desulfurization technology* means an SO<sub>2</sub> control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

*Wet scrubber system* means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO<sub>2</sub>.

*Wood* means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

#### **§ 60.42c Standard for sulfur dioxide (SO<sub>2</sub>).**

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO<sub>2</sub> in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO<sub>2</sub> emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO<sub>2</sub> in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO<sub>2</sub> in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO<sub>2</sub> emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO<sub>2</sub> in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8, whichever date comes first, the owner or operator of an affected facility that:

- (1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO<sub>2</sub> emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO<sub>2</sub> emissions limit or the 90 percent SO<sub>2</sub> reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO<sub>2</sub> emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of 50 percent (0.50) of the potential SO<sub>2</sub> emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO<sub>2</sub> reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/h) or less;

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area; or

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of the following:

(1) The percent of potential SO<sub>2</sub> emission rate or numerical SO<sub>2</sub> emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel;

(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/h); and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

Where:

$E_s$  = SO<sub>2</sub> emission limit, expressed in ng/J or lb/MMBtu heat input;

$K_a$  = 520 ng/J (1.2 lb/MMBtu);

$K_b$  = 260 ng/J (0.60 lb/MMBtu);

$K_c$  = 215 ng/J (0.50 lb/MMBtu);

$H_a$  = Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];

$H_b$  = Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and

$H_c$  = Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO<sub>2</sub> emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO<sub>2</sub> emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO<sub>2</sub> control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), (3), or (4) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under § 60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(3) Coal-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(4) Other fuels-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(i) The SO<sub>2</sub> emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this

section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

**§ 60.43c Standard for particulate matter (PM).**

(a) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph (c).

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) An owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under § 60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO<sub>2</sub> emissions is not subject to the PM limit in this section.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

**§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.**

(a) Except as provided in paragraphs (g) and (h) of this section and § 60.8(b), performance tests required under § 60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in § 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under § 60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO<sub>2</sub> emission limits under § 60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and § 60.8, compliance with the percent reduction requirements and SO<sub>2</sub> emission limits under § 60.42c is based on the average percent reduction and the average SO<sub>2</sub> emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO<sub>2</sub> emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO<sub>2</sub> emission rate (E<sub>ho</sub>) and the 30-day average SO<sub>2</sub> emission rate (E<sub>ao</sub>). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate E<sub>ao</sub> when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E<sub>ho</sub> (E<sub>ho o</sub>) is used in Equation 19-19 of Method 19 of appendix A of this part to compute the adjusted E<sub>ao</sub> (E<sub>ao o</sub>). The E<sub>ho o</sub> is computed using the following formula:

$$E_{ho o} = \frac{E_{ho} - E_w(1 - X_1)}{X_1}$$

Where:

$E_{ho} =$  Adjusted  $E_{ho}$ , ng/J (lb/MMBtu);

$E_{ho} =$  Hourly  $SO_2$  emission rate, ng/J (lb/MMBtu);

$E_w =$   $SO_2$  concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value  $E_w$  for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure  $E_w$  if the owner or operator elects to assume  $E_w = 0$ .

$X_k =$  Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of § 60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters  $E_w$  or  $X_k$  if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under § 60.42c(a) or (b) shall determine compliance with the  $SO_2$  emission limits under § 60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential  $SO_2$  emission rate is computed using the following formula:

$$\%P_s = 100 \left( 1 - \frac{\%R_g}{100} \right) \left( 1 - \frac{\%R_f}{100} \right)$$

Where:

$\%P_s =$  Potential  $SO_2$  emission rate, in percent;

$\%R_g =$   $SO_2$  removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f =$   $SO_2$  removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the  $\%P_s$ , an adjusted  $\%R_g$  ( $\%R_{g\ o}$ ) is computed from  $E_{ao}$  or from paragraph (e)(1) of this section and an adjusted average  $SO_2$  inlet rate ( $E_{ai\ o}$ ) using the following formula:

$$\%R_{g\ o} = 100 \left( 1 - \frac{E_w}{E_{ai\ o}} \right)$$

Where:

$\%R_{g\ o} =$  Adjusted  $\%R_g$ , in percent;

$E_{ao} =$  Adjusted  $E_{ao}$ , ng/J (lb/MMBtu); and

$E_{ai\ o} =$  Adjusted average  $SO_2$  inlet rate, ng/J (lb/MMBtu).

(ii) To compute  $E_{ai}$ , an adjusted hourly  $SO_2$  inlet rate ( $E_{hi}$ ) is used. The  $E_{hi}$  is computed using the following formula:

$$E_{hi} = \frac{E_{mi} - E_w(1 - X_k)}{X_k}$$

Where:

$E_{hi}$  = Adjusted  $E_{hi}$ , ng/J (lb/MMBtu);

$E_{mi}$  = Hourly  $SO_2$  inlet rate, ng/J (lb/MMBtu);

$E_w$  =  $SO_2$  concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value  $E_w$  for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure  $E_w$  if the owner or operator elects to assume  $E_w = 0$ ; and

$X_k$  = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under § 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under § 60.46c(d)(2).

(h) For affected facilities subject to § 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the  $SO_2$  standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in § 60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the  $SO_2$  standards under § 60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid  $SO_2$  emissions data in calculating  $\%P_s$  and  $E_{ho}$  under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under § 60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating  $\%P_s$  or  $E_{ho}$  pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

**§ 60.45c Compliance and performance test methods and procedures for particulate matter.**

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under § 60.43c shall conduct an initial performance test as required under § 60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3A or 3B of appendix A-2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A-3 of this part or 17 of appendix A-6 of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O<sub>2</sub> or CO<sub>2</sub> measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A-4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under § 60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

- (3) The monitor shall be installed, evaluated, and operated in accordance with § 60.13 of subpart A of this part.
- (4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under § 60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.
- (5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under § 60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.
- (6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.
- (7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (c)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.
- (i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.
- (ii) [Reserved]
- (8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under § 60.13(e)(2) of subpart A of this part.
- (9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (c)(7) of this section are not met.
- (10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.
- (11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O<sub>2</sub> (or CO<sub>2</sub>) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.
- (i) For PM, Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used; and
- (ii) For O<sub>2</sub> (or CO<sub>2</sub>), Method 3A or 3B of appendix A-2 of this part, as applicable shall be used.
- (12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.
- (13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.
- (14) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in § 60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit ( *i.e.*, reference method) data and performance test ( *i.e.*, compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see [http://www.epa.gov/ttn/chief/ert/ert\\_tool.html/](http://www.epa.gov/ttn/chief/ert/ert_tool.html/)) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(d) The owner or operator of an affected facility seeking to demonstrate compliance under § 60.43c(e)(4) shall follow the applicable procedures under § 60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/h).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9463, Feb. 16, 2012]

**§ 60.46c Emission monitoring for sulfur dioxide.**

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO<sub>2</sub> emission limits under § 60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO<sub>2</sub> concentrations and either O<sub>2</sub> or CO<sub>2</sub> concentrations at the outlet of the SO<sub>2</sub> control device (or the outlet of the steam generating unit if no SO<sub>2</sub> control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under § 60.42c shall measure SO<sub>2</sub> concentrations and either O<sub>2</sub> or CO<sub>2</sub> concentrations at both the inlet and outlet of the SO<sub>2</sub> control device.

(b) The 1-hour average SO<sub>2</sub> emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under § 60.42c. Each 1-hour average SO<sub>2</sub> emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under § 60.13(h)(2). Hourly SO<sub>2</sub> emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under § 60.42c, the span value of the SO<sub>2</sub> CEMS at the inlet to the SO<sub>2</sub> control device shall be 125 percent of the maximum estimated hourly potential SO<sub>2</sub> emission rate of the fuel combusted, and the span value of the SO<sub>2</sub> CEMS at the outlet from the SO<sub>2</sub> control device shall be 50 percent of the maximum estimated hourly potential SO<sub>2</sub> emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of § 60.42c, the span value of the SO<sub>2</sub> CEMS at the outlet from the SO<sub>2</sub> control device (or outlet of the steam generating unit if no SO<sub>2</sub> control device is used) shall be 125 percent of the maximum estimated hourly potential SO<sub>2</sub> emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO<sub>2</sub> control device (or outlet of the steam generating unit if no SO<sub>2</sub> control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO<sub>2</sub> emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO<sub>2</sub> control device (or outlet of the steam generating unit if no SO<sub>2</sub> control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO<sub>2</sub> emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according to the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO<sub>2</sub> input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when

calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO<sub>2</sub> at the inlet or outlet of the SO<sub>2</sub> control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO<sub>2</sub> and CO<sub>2</sub> measurement train operated at the candidate location and a second similar train operated according to the procedures in § 3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to § 60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO<sub>2</sub> standards based on fuel supplier certification, as described under § 60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

#### **§ 60.47c Emission monitoring for particulate matter.**

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under § 60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in § 60.43c(c) that is not required to use a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to use a COMS shall conduct a performance test using Method 9 of appendix A-4 of this part and the procedures in § 60.11 to demonstrate compliance with the applicable limit in § 60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A-4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A-4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from

the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period ( *i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period ( *i.e.*, 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation ( *i.e.*, 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in § 60.45c(a)(8).

(ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO<sub>2</sub> or PM emissions and that are subject to an opacity standard in § 60.43c(c) are not required to operate a COMS if they follow the applicable procedures in § 60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in § 60.45c(c). The CEMS specified in paragraph § 60.45c(c) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) Owners and operators of an affected facility that is subject to an opacity standard in § 60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO<sub>2</sub> , or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS.

Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in § 60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in § 60.13(h)(2).

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An owner or operator of an affected facility that is subject to an opacity standard in § 60.43c(c) is not required to operate a COMS provided that the affected facility meets the conditions in either paragraphs (f)(1), (2), or (3) of this section.

(1) The affected facility uses a fabric filter (baghouse) as the primary PM control device and, the owner or operator operates a bag leak detection system to monitor the performance of the fabric filter according to the requirements in section § 60.48Da of this part.

(2) The affected facility uses an ESP as the primary PM control device, and the owner or operator uses an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the requirements in section § 60.48Da of this part.

(3) The affected facility burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the owner or operator operates the unit according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§ 60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under § 60.48c(c).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9463, Feb. 16, 2012]

**§ 60.48c Reporting and recordkeeping requirements.**

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by § 60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under § 60.42c, or § 60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO<sub>2</sub> emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO<sub>2</sub> emission limits of § 60.42c, or the PM or opacity limits of § 60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in § 60.7, the owner or operator of an affected facility subject to the opacity limits in § 60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator

(d) The owner or operator of each affected facility subject to the SO<sub>2</sub> emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO<sub>2</sub> emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO<sub>2</sub> emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO<sub>2</sub> emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO<sub>2</sub> or diluent (O<sub>2</sub> or CO<sub>2</sub>) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in § 60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in § 60.48c(f) to demonstrate compliance with the SO<sub>2</sub> standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in § 60.42C to use fuel certification to demonstrate compliance with the SO<sub>2</sub> standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under § 60.42c or § 60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

**Indiana Department of Environmental Management  
Office of Air Quality**

Technical Support Document (TSD) for a  
Federally Enforceable State Operating Permit (FESOP)

**Source Description and Location**

**Source Name:** Darling Ingredients Inc.  
**Source Location:** 7358 South Griffin Road, Newberry, IN 47449  
**County:** Greene  
**SIC Code:** 2077 (Animal and Marine Fats and Oils)  
**Operation Permit No.:** F055-37321-00008  
**Permit Reviewer:** Joshua Levering

On June 21, 2016, the Office of Air Quality (OAQ) received an application from Darling Ingredients Inc. related to the transition of a Part 70 Operating Permit to a FESOP.

**Existing Approvals**

The source has been operating under previous approvals including, but not limited to, the following:

Permit Number	Issuance Date
Administrative Amendment No. 055-36000-00008	July 10, 2015
Significant Permit Modification No. 055-34320-00008	September 4, 2014
Significant Source Modification No. 055-34253-00008	August 19, 2014
Part 70 Operating Permit Renewal No. T055-32418-00008	October 16, 2013

Due to this application, the source is transitioning from a Part 70 Operating Permit Renewal to a FESOP.

**County Attainment Status**

The source is located in Greene County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. <sup>1</sup>
PM <sub>2.5</sub>	Unclassifiable or attainment effective April 5, 2005, for the annual PM <sub>2.5</sub> standard.
PM <sub>2.5</sub>	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM <sub>2.5</sub> standard.
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

<sup>1</sup>Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

- (a) **Ozone Standards**  
 Volatile organic compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. Greene County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) **PM<sub>2.5</sub>**  
Greene County has been classified as attainment for PM<sub>2.5</sub>. Therefore, direct PM<sub>2.5</sub>, SO<sub>2</sub>, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) **Other Criteria Pollutants**  
Greene County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

### **Fugitive Emissions**

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

### **Greenhouse Gas (GHG) Emissions**

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at [http://www.supremecourt.gov/opinions/13pdf/12-1146\\_4g18.pdf](http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf)) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

### **Background and Description of Permitted Emission Units**

The Office of Air Quality (OAQ) has reviewed an application, submitted by Darling Ingredients Inc. on June 21, 2016, to the transition of a Part 70 Operating Permit to a FESOP.

The source consists of the following permitted emission units:

- (a) Blood meal making process, constructed in 1968 (except Dupps dryer, constructed in 2014), with a maximum production rate of 1.0 ton of blood meal per hour, controlled by a series of 3 scrubbers with sequence as Blood Centrifuge Venturi Scrubber (Venturi1C), Packed Bed Scrubber (Packed 1C) and In-Room Air Scrubber (Room 32B), exhausting to Stack RAS-2 and consisting of the following:
- (I) Blood receiving
  - (II) Coagulator
  - (III) Centrifuge
  - (IV) One (1) steam heated dryer, identified as Dupps dryer, constructed in 2014, with a maximum production rate of 1.0 ton of blood meal per hour and exhausting to Stack RAS-2.
  - (V) Shell and tube Condenser
  - (VI) Screen
  - (VII) Storage

- (b) Feather meal making process, constructed in 1968, with a maximum production rate of 2.88 tons of feather meal per hour, controlled by a series of 3 scrubbers with sequence as Feather Plant Venturi Scrubber (Venturi10B), Feather Plant Packed Bed Scrubber (Packed 10B) and In-Room Air Scrubber (Room 32B), exhausting to Stack RAS-2, and consisting of the following:
- (I) Feather receiving and spreader
  - (II) Hydrolizer
  - (III) Feather Press
  - (IV) Feather Dryer, identified as Feather Dryer
  - (V) Shell and tube Condensers and cooling tower
  - (VI) Hammermill
- (c) Poultry/Fat/Bone meal making process, constructed in 1968, with a maximum production rate of 10.49 tons of Poultry/Fat/Bone meal per hour, controlled by series of 3 scrubbers with sequence as Meat Plant Venturi Scrubber (Venturi 3A), Meat Plant Packed Bed Scrubber (Packed 3A) and Meat Plant In-Room Air Scrubber (Room 32A), exhausting to Stack RAS-1, and consisting of the following:
- (I) Two (2) Grinders
  - (II) Two (2) Cookers (Cooker A and Cooker B)
  - (III) Drainers
  - (IV) Presses
  - (V) Screens
  - (VI) Centrifuges
  - (VII) Shell and tube Condensers and cooling tower
- (d) Four (4) natural gas-fired boilers, identified as 05, 06, 07, and 08, constructed in 2008, used for supplying heat in Feather meal, Poultry/Fat/Bone meal and Blood Meal making processes, each is capable of burning processed fats and No. 2 fuel oil as backup fuels. Each boiler 05, 06, and 07 has a heat input capacity of 50.2 million British thermal units per hour (MMBtu/hr), exhausting to stacks H, I, and J respectively, and boiler 08 has a heat input capacity of 33.746 MMBtu/hr, exhausting to stack K.
- Note:** Boilers 05, 06, 07, and 08 are considered gas-fired boilers as defined in 40 CFR 63.11237. Therefore, the source is exempt from the requirements of 40 CFR 63, Subpart JJJJJ, pursuant to 40 CFR 63.11195(e). At any time the boilers no longer meet the definition of gas-fired boiler, as defined in 40 CFR 63.11237, the source shall comply with the applicable requirements of 40 CFR 63, Subpart JJJJJ.
- (e) Material storage and handling facilities including:
- (1) Three (3) 250 ton capacity enclosed silos, used for storing meat meal, feather meal, and poultry/fat/bone meal, with five (5) screw conveyors for material handling, and
  - (2) One (1) 30 ton capacity enclosed silo, used for storing blood meal, with three (3) screw conveyor for material handling.

<b>Enforcement Issues</b>
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IDEM, OAQ is aware that there is a pending enforcement action for failure to take pressure drop readings. IDEM, OAQ is reviewing this matter and will take the appropriate action.

**Emission Calculations**

See Appendix A of this TSD for detailed emission calculations.

**Permit Level Determination – FESOP**

The following table reflects the unlimited non-fugitive potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	22.13
PM10 <sup>(1)</sup>	26.89
PM2.5 <sup>(1)</sup>	25.44
SO <sub>2</sub>	409.49
NO <sub>x</sub>	128.38
VOC	65.51
CO	66.49

- (1) Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10) and particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers (PM2.5), not particulate matter (PM), are each considered as a "regulated air pollutant".

HAPs	Potential To Emit (tons/year)
Highest Single HAP (Hexane)	1.42
TOTAL HAPs	1.53

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(30)) of SO<sub>2</sub> and NO<sub>x</sub> are each greater than one hundred (100) tons per year. The PTE of all other regulated criteria pollutants are each less than one hundred (100) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8), because the source will limit emissions to less than the Title V major source threshold levels.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(30)) of any single HAP is less than ten (10) tons per year and the PTE of any combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is an area source under Section 112 of the Clean Air Act (CAA).

**PTE of the Entire Source After Issuance of the FESOP**

The table below summarizes the potential to emit of the entire source after issuance of this FESOP, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of FESOP (tons/year)								
	PM	PM10*	PM2.5*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs	Worst Single HAP
Fuel Combustion	11.53	13.73	12.28	40.95	<100	4.35	66.49	1.53	1.42 Hexane
Poultry/fat/bone meal making operation	0.70	2.57	2.57	-	-	24.90	-	-	-
Feather meal making operation	0.19	0.71	0.71	-	-	24.90	-	-	-
Blood meal making operation	0.07	0.25	0.25	-	-	11.36	-	-	-
Silos	9.64	9.64	9.64	-	-	-	-	-	-
Fugitive Roadways**	28.27	6.45	1.12	-	-	-	-	-	-
<b>Total PTE of Entire Source</b>	<b>22.13</b>	<b>26.89</b>	<b>25.44</b>	<b>40.95</b>	<b>&lt;100</b>	<b>65.51</b>	<b>66.49</b>	<b>1.53</b>	<b>1.42 Hexane</b>
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	NA	NA
negl. = negligible *Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant". ** Fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.									

(a) FESOP Status

This existing source is not a Title V major stationary source, because the potential to emit criteria pollutants from the entire source will be limited to less than the Title V major source threshold levels. In addition, this existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the potential to emit HAPs is less than ten (10) tons per year for a single HAP and twenty-five (25) tons per year of total HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act and is subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:

- (1) The sulfur content of the No. 2 fuel oil combusted in boilers 05, 06, 07 and 08, shall not exceed 0.05% by weight.
- (2) The combined NO<sub>x</sub> emissions from combusting natural gas, No. 2 fuel oil, and processed fats in boilers 05, 06, 07, and 08, shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit SO<sub>2</sub> and NO<sub>x</sub> from all other emission units at this source, shall limit the source-wide total potential to emit of SO<sub>2</sub> and NO<sub>x</sub> to less than 100 tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(b) PSD Minor Source

This existing source is not a major stationary source, under PSD (326 IAC 2-2), because:

- (1) The potential to emit SO<sub>2</sub> is limited to less than 250 tons per year,
- (2) The potential to emit all other PSD regulated pollutants are less than 250 tons per year,

- (3) This source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1), and

Compliance with the FESOP SO<sub>2</sub> limits, combined with the potential to emit SO<sub>2</sub> from all other emission units at this source, shall limit the source-wide total potential to emit of SO<sub>2</sub> to less than 250 tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

### Federal Rule Applicability Determination

#### New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Fossil-Fuel-Fired Steam Generators, 40 CFR 60, Subpart D (326 IAC 12), are not included in the permit, since each of the four (4) boilers at the source have heat input rates not greater than 73 megawatts (MW) or two hundred and fifty (250) MMBtu/hr.
- (b) The requirements of the New Source Performance Standard for Electric Utility Steam Generating Units, 40 CFR 60, Subpart Da (326 IAC 12), are not included in the permit, since none of the four (4) boilers at the source are considered an "electric utility steam-generating unit," as defined in 40 CFR 60.41Da.
- (c) The requirements of the New Source Performance Standard for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Db (326 IAC 12), are not included in the permit, since each of the four (4) boilers at the source have heat input rates not greater than 29 megawatts (MW) or one hundred (100) MMBtu/hr.
- (d) This source is subject to the New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR 60, Subpart Dc), because the four (4) boilers, identified as 05, 06, 07, and 08, each, were constructed after June 9, 1989 and have a maximum design heat input capacity of 29 megawatts (MW) or one hundred (100) MMBtu/hr or less, but greater than or equal to 2.9 MW, or 10 MMBtu/hr.

The units subject to this rule include the following:

- (1) Four (4) natural gas-fired boilers, identified as 05, 06, 07, and 08, constructed in 2008, used for supplying heat in Feather meal, Poultry/Fat/Bone meal and Blood Meal making processes, each is capable of burning processed fats and No. 2 fuel oil as backup fuels. Each boiler 05, 06, and 07 has a heat input capacity of 50.2 million British thermal units per hour (MMBtu/hr), exhausting to stacks H, I, and J respectively, and boiler 08 has a heat input capacity of 33.746 MMBtu/hr, exhausting to stack K.

Applicable portions of the NSPS are the following:

- (1) 40 CFR 60.40c  
(2) 40 CFR 60.41c  
(3) 40 CFR 60.42c(d), (h)(1), (i)  
(4) 40 CFR 60.43c(c), (d), (e)(1) or (2)  
(5) 40 CFR 60.44c(g), (h)  
(6) 40 CFR 60.45c(a), (b)  
(7) 40 CFR 60.46c(e)  
(8) 40 CFR 60.47c(f)  
(9) 40 CFR 60.48c(a), (c), (d), (e)(1), (2), (3), (11), (f)(1), (g)(1), (2), (i), (j)

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the units except as otherwise specified in 40 CFR 60, Subpart Dc.

- (e) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (a) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63.7480, Subpart DDDDD (326 IAC 20-95), are not included in the permit, since the four (4) boilers, identified as 05, 06, 07, and 08, are not located at a major source of HAP.
- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63.11193, Subpart JJJJJJ, are not included in the permit, since the four (4) boilers, identified as 05, 06, 07, and 08, are considered gas-fired boilers as defined in 40 CFR 63.11237. Therefore, the source is exempt from the requirements of 40 CFR 63, Subpart JJJJJJ, pursuant to 40 CFR 63.11195(e). At any time the boilers no longer meet the definition of gas-fired boiler, as defined in 40 CFR 63.11237, the source shall comply with the applicable requirements of 40 CFR 63, Subpart JJJJJJ.
- (c) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

<b>State Rule Applicability Determination</b>
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The following state rules are applicable to the source:

326 IAC 1-7 (Stack Height)

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

326 IAC 2-8-4 (FESOP)

FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.

326 IAC 2-2 (Prevention of Significant Deterioration(PSD))

PSD applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

This source is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the existing units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.

326 IAC 2-6 (Emission Reporting)

Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions Limitations)

Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

The source is not located in a county listed in 326 IAC 6-5-1(a). Based on affirmations made by the source, Darling Ingredients Inc. had received all the necessary preconstruction approvals before December 13, 1985 and has not added a facility with the potential to emit fugitive particulate matter, which requires a permit as set forth in 326 IAC 2, after December 13, 1985. Therefore, the source is not subject to the requirements of 326 IAC 6-5.

326 IAC 12 (New Source Performance Standards)

See Federal Rule Applicability Section of this TSD.

326 IAC 20 (Hazardous Air Pollutants)

See Federal Rule Applicability Section of this TSD.

Four (4) natural gas-fired boilers, identified as 05, 06, 07, and 08

326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.

The particulate matter emissions (Pt) shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).

Q = Total source maximum operating capacity rating in MMBtu/hr heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation.

Pursuant to 326 IAC 6-2-4(a), the Q is equal to 184.35 MMBtu/hr, Pt shall not exceed 0.28

lb/MMBtu, total, for the four (4) boilers.

326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)

The four (4) boilers, identified as 05, 06, 07, and 08, each, have potential to emit twenty-five (25) tons per year and/or ten (10) pounds per hour of sulfur dioxide. Therefore, these emission units are subject to the requirements of this rule.

Pursuant to 326 IAC 7-1.1-2(a), the SO<sub>2</sub> emissions from each boiler shall not exceed 0.5 lb/MMBtu in the following scenarios:

- (i) when combusting No. 2 fuel oil only;
- (ii) when combusting No. 2 fuel oil and processed fats simultaneously.

Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

No SO<sub>2</sub> limits are specified under this rule when processed fats is combusted alone since it does not constitute a distillate oil or residual oil. No. 2 fuel oil is considered distillate oil.

Blood meal, Feather meal, and Poultry/Fat/Bone meal making processes

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate matter (PM) emissions from the Blood Meal, Feather Meal, and Poultry/Fat/Bone Meal making processes shall not exceed the emission limits shown in the table below:

Operation	P (tons/hr)	Allowable PM E (lbs/hr)
Blood Meal	1.00	4.10
Feather Meal	2.88	8.33
Poultry/Fat/Bone Meal	10.49	19.80

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

Where: E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

No control devices are needed for the Blood Meal, Feather Meal, and/or Poultry/Fat/Bone Meal making processes in order to assure compliance with their respective limits identified in the table above.

326 IAC 8-1-6 (New facilities; general reduction requirements)

- (1) Equipment in the Blood meal making, Feather meal making and Poultry/Fat/Bone meal making processes constructed in 1968.

Except for the Dupps dryer (constructed in 2014), all the equipment in the Blood meal making, Feather meal making and Poultry/Fat/Bone meal making processes was constructed in 1968. Therefore, the requirements of this rule do not apply to any of the equipment in the Blood meal making, Feather meal making, and Poultry/Fat/Bone meal making processes (excluding the Dupps dryer).

- (2) Dupps dryer  
Although constructed after January 1, 1980, the Dupps dryer is not subject to 326 IAC 8-1-6, since this unit has potential emissions less than twenty-five (25) tons per twelve (12) consecutive month period. Stack testing performed in July 2015 showed an uncontrolled potential to emit of VOC of 2.593 pounds per ton, which is equivalent to 11.36 tons per year, when operating at the maximum rated capacity of 1.0 tons per hour.
- (3) There are no other 326 IAC 8 Rules that are applicable to the facility.

<b>Compliance Determination, Monitoring and Testing Requirements</b>
--

- (a) The compliance determination requirements applicable to this source are as follows:
  - (1) The sulfur content of the No.2 fuel oil shall be determined using one of the following options:
    - (A) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five tenths (0.5) pounds per million British thermal units heat input when combusting No. 2 fuel oil by:
      - (i) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;
      - (ii) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
        - (a) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
        - (b) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
    - (B) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the boiler using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

- (2) The Permittee shall determine NO<sub>x</sub> emissions according to the following formula:

Nitrogen Oxides Emission Calculation

$$N = \frac{G(E_G) + O(E_O) + P(E_P)}{2,000 \text{ lbs/ton}}$$

where:

N = tons of nitrogen oxides emissions for 12 month consecutive period

G = million cubic feet of natural gas used in previous 12 months

O = gallons of No. 2 fuel oil used in previous 12 months

P = gallons of processed fats used for the last 12 months

E<sub>G</sub> = 100 pounds/million cubic feet of natural gas

E<sub>O</sub> = 20 pounds/1000 gallons of No. 2 fuel oil

E<sub>P</sub> = 19.88 pounds/1000 gallons of processed fats

- (b) There are no compliance monitoring requirements applicable to this source.
- (c) The testing requirements applicable to this source are as follows:

Testing Requirements				
Emission Unit	Control Device	Pollutant	Timeframe for Testing	Frequency of Testing
Poultry/Fat/Bone meal making process	Meat Plant Venturi Scrubber (Venturi 3A) Meat Plant Packed Bed Scrubber (Packed 3A) Meat Plant In-Room Air Scrubber (Room 32A)	PM, PM10, PM2.5	Not later than 180 days after issuance of this FESOP	One-time emission factor verification test.
Feather meal making process	Feather Plant Venturi Scrubber (Venturi10B) Feather Plant Packed Bed Scrubber (Packed 10B) Feather Plant In-Room Air Scrubber (Room 32B)	PM, PM10, PM2.5		
Blood meal making process	Blood Centrifuge Venturi Scrubber (Venturi1C) Blood Dryer Scrubber (Spray13C)	PM, PM10, PM2.5		

The one-time VOC testing requirement for the Dupps Dryer is being removed from the permit since testing was completed on July 6 and 7, 2015.

A one-time testing requirement for PM, PM10, and PM2.5 is being added to the permit to verify the uncontrolled potentials to emit particulate matter from the poultry/fat/bone meal making process, feather meal making process, and blood meal making process, since the source is using alternative emission factors to estimate particulate emissions from these operations.

PM10 and PM2.5 repeat testing is being removed from the permit since the potentials to emit of these pollutants, using the alternative emission factors, are estimated to be below the Title V thresholds and the FESOP limits for these pollutants have been removed from the permit.

**Conclusion and Recommendation**

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on June 21, 2016.

The construction and operation of this source shall be subject to the conditions of the attached proposed FESOP No. F055-37321-00008. The staff recommends to the Commissioner that this FESOP be approved.

**IDEM Contact**

- (a) Questions regarding this proposed permit can be directed to Joshua Levering at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-6543 or toll free at 1-800-451-6027 extension 4-6543.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

**Appendix A: Emissions Calculations  
Summary**

**Company Name:** Darling Ingredients Inc.  
**Address City IN Zip:** 7358 South Griffin Road, Newberry, IN 47449  
**FESOP No.:** F055-37321-00008  
**Reviewer:** Joshua Levering

Uncontrolled Emissions (tons/yr)										
Process or Emission Unit	PM	PM10	direct PM2.5	SO2	NOx	VOC <sup>1</sup>	CO	H2S <sup>1,2</sup>	Total HAPs	Worst Single HAP (Hexane)
Fuel Combustion	11.53	13.73	12.28	409.49	128.38	4.35	66.49	-	1.53	1.42
Poultry meal/fat making operation	0.70	2.57	2.57	-	-	24.90	-	18.38	-	-
Feather meal making operation	0.19	0.71	0.71	-	-	24.90	-	5.05	-	-
Blood meal making operation	0.07	0.25	0.25	-	-	11.36	-	1.75	-	-
Silos	9.64	9.64	9.64	-	-	-	-	-	-	-
Fugitive Roads	28.27	6.45	1.12	-	-	-	-	-	-	-
<b>Total</b>	<b>22.13</b>	<b>26.89</b>	<b>25.44</b>	<b>409.49</b>	<b>128.38</b>	<b>65.51</b>	<b>66.49</b>	<b>25.18</b>	<b>1.53</b>	<b>1.42</b>

Potential to Emit After Issuance (tons/yr)										
Process or Emission Unit	PM	PM10	direct PM2.5	SO2	NOx	VOC <sup>1</sup>	CO	H2S <sup>1,2</sup>	Total HAPs	Worst Single HAP (Hexane)
Fuel Combustion	11.53	13.73	12.28	40.95	99.00	4.35	66.49	-	1.53	1.42
Poultry meal/fat making operation	0.70	2.57	2.57	-	-	24.90	-	18.38	-	-
Feather meal making operation	0.19	0.71	0.71	-	-	24.90	-	5.05	-	-
Blood meal making operation	0.07	0.25	0.25	-	-	11.36	-	1.75	-	-
Silos	9.64	9.64	9.64	-	-	-	-	-	-	-
Fugitive Roads	28.27	6.45	1.12	-	-	-	-	-	-	-
<b>Total</b>	<b>22.13</b>	<b>26.89</b>	<b>25.44</b>	<b>40.95</b>	<b>99.00</b>	<b>65.51</b>	<b>66.49</b>	<b>25.18</b>	<b>1.53</b>	<b>1.42</b>

Gray cells are limited values.

<sup>1</sup> VOC and H2S controls are not federally enforceable in the permit. Therefore, uncontrolled numbers have been used.

<sup>2</sup> H2S (Hydrogen Sulfide) is not a Hazardous Air Pollutant.

NOTE: Fugitive Road emissions are not counted toward the determination of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) or 326 IAC 2-7 (Part 70 Permits).

**Appendix A: Emissions Calculations  
Natural Gas Combustion**

**Company Name:** Darling Ingredients Inc.  
**Address City IN Zip:** 7358 South Griffin Road, Newberry, IN 47449  
**FESOP No.:** F055-37321-00008  
**Reviewer:** Joshua Levering

Heat Input Capacity	HHV	Potential Throughput
MMBtu/hr	$\frac{\text{mmBtu}}{\text{mmscf}}$	MMCF/yr

Boiler 05	50.20	1020	431.13
Boiler 06	50.20	1020	431.13
Boiler 07	50.20	1020	431.13
Boiler 08	33.75	1020	289.82

	Pollutant (tons/yr)						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **	5.5	84
Emission Rate in lb/MMBtu	0.0019	0.0075	0.0075	0.0006	0.0980	0.0054	0.0824
Boiler 05	0.41	1.64	1.64	0.13	21.56	1.19	18.11
Boiler 06	0.41	1.64	1.64	0.13	21.56	1.19	18.11
Boiler 07	0.41	1.64	1.64	0.13	21.56	1.19	18.11
Boiler 08	0.28	1.10	1.10	0.09	14.49	0.80	12.17
<b>Total</b>	<b>1.50</b>	<b>6.02</b>	<b>6.02</b>	<b>0.47</b>	<b>79.16</b>	<b>4.35</b>	<b>66.49</b>

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Rate in lb/MMBtu = Emission Factor (lb/MMCF) / 1020 (MMBtu/MMCF)

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

	HAPs Emissions				
	HAPs - Organics (tons/yr)				
Emission Factor in lb/MMCF	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Boiler 05	4.527E-04	2.587E-04	1.617E-02	3.880E-01	7.329E-04
Boiler 06	4.527E-04	2.587E-04	1.617E-02	3.880E-01	7.329E-04
Boiler 07	4.527E-04	2.587E-04	1.617E-02	3.880E-01	7.329E-04
Boiler 08	3.043E-04	1.739E-04	1.087E-02	2.608E-01	4.927E-04
<b>Total</b>	<b>1.66E-03</b>	<b>9.50E-04</b>	<b>5.94E-02</b>	<b>1.42</b>	<b>2.69E-03</b>

	HAPs - Metals (tons/yr)				
	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Boiler 05	1.078E-04	2.371E-04	3.018E-04	8.191E-05	4.527E-04
Boiler 06	1.078E-04	2.371E-04	3.018E-04	8.191E-05	4.527E-04
Boiler 07	1.078E-04	2.371E-04	3.018E-04	8.191E-05	4.527E-04
Boiler 08	7.245E-05	1.594E-04	2.029E-04	5.507E-05	3.043E-04
<b>Total</b>	<b>3.96E-04</b>	<b>8.71E-04</b>	<b>1.11E-03</b>	<b>3.01E-04</b>	<b>1.66E-03</b>
					<b>Total</b>
					1.49

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emissions Calculations  
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)  
Unlimited No. 2 Fuel Oil**

**Company Name: Darling Ingredients Inc.  
Address City IN Zip: 7358 South Griffin Road, Newberry, IN 47449  
FESOP No.: F055-37321-00008  
Reviewer: Joshua Levering**

	Heat Input Capacity	Potential Throughput	S = Weight % Sulfur
	MMBtu/hr	kgals/year	
			0.5
Boiler 05	50.20	3141.09	
Boiler 06	50.20	3141.09	
Boiler 07	50.20	3141.09	
Boiler 08	33.75	2111.54	

Uncontrolled Emissions	Pollutant (tons/yr)						
	PM*	PM10	direct PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	2.4	2.1	71 (142.0S)	20.0	0.34	5.0
Emission Rate in lb/MMBtu	0.014	0.017	0.015	0.507	0.143	0.002	0.036
Boiler 05	3.14	3.74	3.35	111.51	31.41	0.53	7.85
Boiler 06	3.14	3.74	3.35	111.51	31.41	0.53	7.85
Boiler 07	3.14	3.74	3.35	111.51	31.41	0.53	7.85
Boiler 08	2.11	2.51	2.25	74.96	21.12	0.36	5.28
	<b>11.53</b>	<b>13.73</b>	<b>12.28</b>	<b>409.49</b>	<b>115.35</b>	<b>1.96</b>	<b>28.84</b>

**Methodology**

Heating Value of No.2 Oil = 140 MMBtu/kgal  
 1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu  
 Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu  
 Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98.  
 \*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.  
 Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton  
 Emission Rate in lb/MMBtu = Emission Factor (lb/kgal) / 140 (MMBtu/kgal)

**HAPs Emissions**

Emission Factor in lb/mmBtu	HAPs - Metals (tons/yr)				
	Arsenic	Beryllium	Cadmium	Chromium	Lead
	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06
Boiler 05	8.80E-04	6.60E-04	6.60E-04	6.60E-04	1.98E-03
Boiler 06	8.80E-04	6.60E-04	6.60E-04	6.60E-04	1.98E-03
Boiler 07	8.80E-04	6.60E-04	6.60E-04	6.60E-04	1.98E-03
Boiler 08	5.91E-04	4.43E-04	4.43E-04	4.43E-04	1.33E-03
Total:	3.23E-03	2.42E-03	2.42E-03	2.42E-03	7.27E-03

Emission Factor in lb/mmBtu	HAPs - Metals (tons/yr)			
	Mercury	Manganese	Nickel	Selenium
	3.0E-06	6.0E-06	3.0E-06	1.5E-05
Boiler 05	6.60E-04	1.32E-03	6.60E-04	3.30E-03
Boiler 06	6.60E-04	1.32E-03	6.60E-04	3.30E-03
Boiler 07	6.60E-04	1.32E-03	6.60E-04	3.30E-03
Boiler 08	4.43E-04	8.87E-04	4.43E-04	2.22E-03
Total:	2.42E-03	4.84E-03	2.42E-03	1.21E-02
				<b>Total</b>
				0.04

**Methodology**

No data was available in AP-42 for organic HAPs.  
 Potential Emissions (tons/year) = Throughput (mmBtu/hr)\*Emission Factor (lb/mmBtu)\*8,760 hrs/yr / 2,000 lb/ton

**Appendix A: Emissions Calculations**  
**Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)**  
**Limited No. 2 Fuel Oil Sulfur Content and NOx Emissions**

**Company Name:** Darling Ingredients Inc.  
**Address City IN Zip:** 7358 South Griffin Road, Newberry, IN 47449  
**FESOP No.:** F055-37321-00008  
**Reviewer:** Joshua Levering

**Limited Sulfur Content**

**S = Weight % Sulfur**

**0.05**

	Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year
Boiler 05	50.20	3141.09
Boiler 06	50.20	3141.09
Boiler 07	50.20	3141.09
Boiler 08	33.75	2111.54

Uncontrolled Emissions	Pollutant (tons/yr)						
	PM*	PM10	direct PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	2.4	2.1	7.1 (142.0S)	-	0.34	5.0
Emission Rate in lb/MMBtu	0.014	0.017	0.015	0.051	-	0.002	0.036
Boiler 05	3.14	3.74	3.35	11.15	99.00	0.53	7.85
Boiler 06	3.14	3.74	3.35	11.15		0.53	7.85
Boiler 07	3.14	3.74	3.35	11.15		0.53	7.85
Boiler 08	2.11	2.51	2.25	7.50		0.36	5.28
<b>Total:</b>	<b>11.53</b>	<b>13.73</b>	<b>12.28</b>	<b>40.95</b>	<b>99.00</b>	<b>1.96</b>	<b>28.84</b>

**Note**

Nox emissions

**Methodology**

Heating Value of No.2 Oil = 140 MMBtu/kgal

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98.

\*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.

Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

Emission Rate in lb/MMBtu = Emission Factor (lb/kgal) / 140 (MMBtu/kgal)

**HAPs Emissions**

Emission Factor in lb/mmBtu	HAPs - Metals (tons/yr)				
	Arsenic	Beryllium	Cadmium	Chromium	Lead
	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06
Boiler 05	8.80E-04	6.60E-04	6.60E-04	6.60E-04	1.98E-03
Boiler 06	8.80E-04	6.60E-04	6.60E-04	6.60E-04	1.98E-03
Boiler 07	8.80E-04	6.60E-04	6.60E-04	6.60E-04	1.98E-03
Boiler 08	5.91E-04	4.43E-04	4.43E-04	4.43E-04	1.33E-03
<b>Total:</b>	<b>3.23E-03</b>	<b>2.42E-03</b>	<b>2.42E-03</b>	<b>2.42E-03</b>	<b>7.27E-03</b>

Emission Factor in lb/mmBtu	HAPs - Metals (tons/yr)			
	Mercury	Manganese	Nickel	Selenium
	3.0E-06	6.0E-06	3.0E-06	1.5E-05
Boiler 05	6.60E-04	1.32E-03	6.60E-04	3.30E-03
Boiler 06	6.60E-04	1.32E-03	6.60E-04	3.30E-03
Boiler 07	6.60E-04	1.32E-03	6.60E-04	3.30E-03
Boiler 08	4.43E-04	8.87E-04	4.43E-04	2.22E-03
<b>Total:</b>	<b>2.42E-03</b>	<b>4.84E-03</b>	<b>2.42E-03</b>	<b>1.21E-02</b>
				<b>Total</b>
				0.04

**Methodology**

No data was available in AP-42 for organic HAPs.

Potential Emissions (tons/year) = Throughput (mmBtu/hr)\*Emission Factor (lb/mmBtu)\*8,760 hrs/yr / 2,000 lb/ton

**Appendix A: Emissions Calculations  
Processed Grease Combustion**

**Company Name: Darling Ingredients Inc.  
Address City IN Zip: 7358 South Griffin Road, Newberry, IN 47449  
FESOP No.: F055-37321-00008  
Reviewer: Joshua Levering**

Heating Value of processed grease = 125.00 MMBtu/kgal

Heat Input Capacity  
MMBtu/hr

Boiler 05	50.20
Boiler 06	50.20
Boiler 07	50.20
Boiler 08	33.75

Emission Factor in lb/MMBtu	Pollutant (tons/yr)						
	PM*	PM10*	PM2.5	SO2	NOx	VOC	CO
	0.010	0.010	0.010	0.0003	0.159	0.00	0.022
Boiler 05	2.20	2.20	2.20	0.07	34.96	0.00	4.84
Boiler 06	2.20	2.20	2.20	0.07	34.96	0.00	4.84
Boiler 07	2.20	2.20	2.20	0.07	34.96	0.00	4.84
Boiler 08	1.48	1.48	1.48	0.04	23.50	0.00	3.25
<b>Total</b>	<b>8.07</b>	<b>8.07</b>	<b>8.07</b>	<b>0.24</b>	<b>128.38</b>	<b>0.00</b>	<b>17.76</b>

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.  
The processed grease emission factors used were based on stack test performed for existing boilers in 2001.

**Methodology**

Processed grease Heating Value = 125,000 Btu/gal  
Emission (tons/yr) = MMBtu/hr x Emission Factor (lb/MMBtu) x 8760 hrs/yr x ton/2000 lb

**Appendix A: Emissions Calculations  
Rendering Operation and Silos**

**Company Name: Darling Ingredients Inc.  
Address City IN Zip: 7358 South Griffin Road, Newberry, IN 47449  
FESOP No.: F055-37321-00008  
Reviewer: Joshua Levering**

**Animal and agricultural byproducts rendering operation**

			Poultry meal/fat making operation	Feather meal making operation	Blood meal making operation
Emission Factors (lb/ton)	Production Rate	tons/hr	10.49	2.88	1.00
	VOC	lb/ton	0.39 *	0.34 *	2.59***
	PM****	lb/ton	0.015	0.015	0.015
	PM10****	lb/ton	0.056	0.056	0.056
	PM2.5****	lb/ton	0.056	0.056	0.056
	H2S*****	lb/ton	0.08 **	0.08 **	0.08 **
Controlled Emission Rate (tons/yr)	VOC	tpy	17.74	4.34	11.36
	PM	tpy	0.07	0.02	0.01
	PM10	tpy	0.26	0.07	0.02
	PM2.5	tpy	0.26	0.07	0.02
Uncontrolled Emission Rate (tons/yr)	VOC	tpy	24.9	24.9	11.36
	PM	tpy	0.70	0.19	0.07
	PM10	tpy	2.57	0.71	0.25
	PM2.5	tpy	2.57	0.71	0.25
	H2S*****	tpy	18.38	5.05	1.75

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)	Uncontrolled Emission Rate (lbs/hr)	PM	lbs/hr	0.16	0.04	0.02
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**Notes:**

- \* Emission factors are supplied by the source and were derived from the after control stack test conducted at similar facility Griffin's Butler, Kentucky.
- \*\* AP42 Table 9.5.3-2 emission factors have been used. Although these emission factors are specified for blood dryer processed, these after control emission factors are also used for the feather meal and poultry meal/fat making processes for calculation purposes.
- \*\*\*This lb/ton emission factor is based on the uncontrolled compliance testing performed on the Blood Meal Making Operation's Dupps dryer in July 2015.
- \*\*\*\*These uncontrolled lb/ton emission factors are based on particulate matter testing performed in July 2015 at the Butler, Kentucky facility.
- \*\*\*\*\*H2S (Hydrogen Sulfide) is not a Hazardous Air Pollutant.

**Methodology:**

Uncontrolled H2S Emission Rate (tons/yr) = Controlled Emission Rate (tons/yr) / (1- (Control Efficiency (%))  
 Uncontrolled PM, PM10, and PM2.5 Emission Rate (tons/yr) = Uncontrolled Emission Factor (lb/ton) \* Production Rate (tons/hr) \* 8760 hrs/yr \* 1 ton/2,000 lbs  
 Uncontrolled VOC Emission Rate (Blood Meal Operation) (tons/yr) = Uncontrolled Emission Factor (lb/ton) x Production Rate (tons/hr) x 8760 hrs/yr x 1 ton/2,000 lbs  
 Uncontrolled VOC Emission Rate (Poultry Meal and Feather Meal Operations) assumed to be less than 24.90 tons/yr.  
 Controlled H2S Emission Rate (tons/yr) = Controlled Emission Factor (lb/ton) x Production Rate (tons/hr) x 8760 hrs/yr x 1 ton/2,000 lbs  
 Controlled PM, PM10, PM2.5 (tons/yr) = Uncontrolled Emission Rate (tons/yr) \* (1- Control Efficiency (%))  
 Controlled VOC Emission Rate (Blood Meal Operation) assumed to be equal to the uncontrolled VOC emission rate for the Blood Meal Operation.  
 Controlled VOC Emission Rate (Poultry Meal and Feather Meal Operations) (tons/yr) = Controlled Emission Factor (lb/ton) x Production Rate (tons/hr) x 8760 hrs/yr x 1 ton/2,000 lbs  
 Scrubber Control Efficiencies are assumed as follows: 90% for PM, PM10 and PM2.5 and 80% for H2S

**Silos**

Uncontrolled Emission Rate for each silo (lb/hr)	# silos	Uncontrolled Emission Rate (tons/yr)
less than 0.55	4	9.64

**Methodology**

Uncontrolled Emission Rate (tons/yr) = Uncontrolled Emission Rate for each silo (lb/hr) x # silos x 8760 hrs/yr x ton/2000 lb

**Appendix A: Emission Calculations  
Fugitive Dust Emissions - Unpaved Roads**

**Company Name: Darling Ingredients Inc.  
Address City IN Zip: 7358 South Griffin Road, Newberry, IN 47449  
FESOP No.: F055-37321-00008  
Reviewer: Joshua Levering**

**Unpaved Roads at Industrial Site**

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one way distance (feet/trip)	Maximum one way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Raw Material Entering (Full Offal)	30.0	1.0	30.0	35.0	1050.0	359	0.068	2.0	744.5
Raw Material Entering (Full Feather)	12.0	1.0	12.0	27.5	330.0	359	0.068	0.8	297.8
Raw Material Entering (Full Blood)	6.0	1.0	6.0	35.0	210.0	359	0.068	0.4	148.9
Raw Material Exiting (Empty Offal)	30.0	1.0	30.0	14.5	435.0	191	0.036	1.1	396.1
Raw Material Exiting (Empty Feather)	12.0	1.0	12.0	14.5	174.0	191	0.036	0.4	158.4
Raw Material Exiting (Empty Blood)	6.0	1.0	6.0	13.0	78.0	191	0.036	0.2	79.2
Finished Material (Full Meal)	38.0	1.0	38.0	39.0	1482.0	718	0.136	5.2	1886.1
Finished Material (Full Grease)	19.0	1.0	19.0	39.0	741.0	718	0.136	2.6	943.1
Finished Material (Empty Meal)	38.0	1.0	38.0	12.5	475.0	0	0.000	0.0	0.0
Finished Material (Empty Grease)	19.0	1.0	19.0	13.0	247.0	0	0.000	0.0	0.0
<b>Totals</b>			<b>210.0</b>		<b>5222.0</b>			<b>12.8</b>	<b>4654.2</b>

Average Vehicle Weight Per Trip =  tons/trip  
Average Miles Per Trip =  miles/trip

Unmitigated Emission Factor,  $E_f = k * [(s/12)^a] * [(W/3)^b]$  (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	6.0	6.0	6.0	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Iron and Steel Production)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	24.9	24.9	24.9	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor,  $E_{ext} = E * [(365 - P)/365]$  (Equation 2 from AP-42 13.2.2)

Mitigated Emission Factor,  $E_{ext} = E * [(365 - P)/365]$   
where P =  days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, $E_f =$	7.81	2.08	0.21	lb/mile
Mitigated Emission Factor, $E_{ext} =$	5.14	1.37	0.14	lb/mile
Dust Control Efficiency =	0%	0%	0%	

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Raw Material Entering (Full Offal)	2.91	0.78	0.08	1.91	0.51	0.05	1.91	0.51	0.05
Raw Material Entering (Full Feather)	1.16	0.31	0.03	0.76	0.20	0.02	0.76	0.20	0.02
Raw Material Entering (Full Blood)	0.58	0.16	0.02	0.38	0.10	0.01	0.38	0.10	0.01
Raw Material Exiting (Empty Offal)	1.55	0.41	0.04	1.02	0.27	0.03	1.02	0.27	0.03
Raw Material Exiting (Empty Feather)	0.62	0.16	0.02	0.41	0.11	0.01	0.41	0.11	0.01
Raw Material Exiting (Empty Blood)	0.31	0.08	0.01	0.20	0.05	0.01	0.20	0.05	0.01
Finished Material (Full Meal)	7.37	1.96	0.20	4.84	1.29	0.13	4.84	1.29	0.13
Finished Material (Full Grease)	3.68	0.98	0.10	2.42	0.65	0.06	2.42	0.65	0.06
Finished Material (Empty Meal)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Finished Material (Empty Grease)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Totals</b>	<b>18.18</b>	<b>4.85</b>	<b>0.48</b>	<b>11.95</b>	<b>3.19</b>	<b>0.32</b>	<b>11.95</b>	<b>3.19</b>	<b>0.32</b>

**Methodology**

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] \* [Maximum trips per day (trip/day)]  
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / 5280 ft/mile]  
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] \* [Maximum one-way distance (mi/trip)]  
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]  
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]  
 Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Unmitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
 Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Mitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
 Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) \* (1 - Dust Control Efficiency)

**Abbreviations**

PM = Particulate Matter  
 PM10 = Particulate Matter (<10 um)  
 PM2.5 = Particulate Matter (<2.5 um)  
 PTE = Potential to Emit

**Appendix A: Emission Calculations  
Fugitive Dust Emissions - Paved Roads**

**Company Name:** Darling Ingredients Inc.  
**Address City IN Zip:** 7358 South Griffin Road, Newberry, IN 47449  
**FESOP No.:** F055-37321-00008  
**Reviewer:** Joshua Levering

**Paved Roads at Industrial Site**

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

**Vehicle Information (provided by source)**

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Raw Material Entering (Full Offal)	30.0	1.0	30.0	35.0	1050.0	1383	0.262	7.9	2868.2
Raw Material Entering (Full Feather)	12.0	1.0	12.0	27.5	330.0	1383	0.262	3.1	1147.3
Raw Material Entering (Full Blood)	6.0	1.0	6.0	35.0	210.0	1591	0.301	1.8	659.9
Raw Material Exiting (Empty Offal)	30.0	1.0	30.0	14.5	435.0	1743	0.330	9.9	3614.7
Raw Material Exiting (Empty Feather)	12.0	1.0	12.0	14.5	174.0	1743	0.330	4.0	1445.9
Raw Material Exiting (Empty Blood)	6.0	1.0	6.0	13.0	78.0	1852	0.351	2.1	768.2
Finished Material (Full Meal)	38.0	1.0	38.0	39.0	1482.0	1133	0.215	8.2	2976.3
Finished Material (Full Grease)	19.0	1.0	19.0	39.0	741.0	1133	0.215	4.1	1488.1
Finished Material (Empty Meal)	38.0	1.0	38.0	12.5	475.0	129	0.024	0.9	338.9
Finished Material (Empty Grease)	19.0	1.0	19.0	13.0	247.0	129	0.024	0.5	169.4
<b>Totals</b>			<b>210.0</b>		<b>5222.0</b>			<b>42.4</b>	<b>15476.8</b>

Average Vehicle Weight Per Trip = 

24.9
------

 tons/trip  
Average Miles Per Trip = 

0.20
------

 miles/trip

Unmitigated Emission Factor, Ef =  $[k * (sL)^{0.91} * (W)^{1.02}]$  (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	24.9	24.9	24.9	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m <sup>2</sup> = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext =  $E * [1 - (p/4N)]$  (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor, Eext =  $Ef * [1 - (p/4N)]$   
where p = 

125
-----

 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)  
N = 

365
-----

 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	2.306	0.461	0.1132	lb/mile
Mitigated Emission Factor, Eext =	2.109	0.422	0.1035	lb/mile
Dust Control Efficiency =	0%	0%	0%	

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Raw Material Entering (Full Offal)	3.31	0.66	0.16	3.02	0.60	0.15	3.02	0.60	0.15
Raw Material Entering (Full Feather)	1.32	0.26	0.06	1.21	0.24	0.06	1.21	0.24	0.06
Raw Material Entering (Full Blood)	0.76	0.15	0.04	0.70	0.14	0.03	0.70	0.14	0.03
Raw Material Exiting (Empty Offal)	4.17	0.83	0.20	3.81	0.76	0.19	3.81	0.76	0.19
Raw Material Exiting (Empty Feather)	1.67	0.33	0.08	1.52	0.30	0.07	1.52	0.30	0.07
Raw Material Exiting (Empty Blood)	0.89	0.18	0.04	0.81	0.16	0.04	0.81	0.16	0.04
Finished Material (Full Meal)	3.43	0.69	0.17	3.14	0.63	0.15	3.14	0.63	0.15
Finished Material (Full Grease)	1.72	0.34	0.08	1.57	0.31	0.08	1.57	0.31	0.08
Finished Material (Empty Meal)	0.39	0.08	0.02	0.36	0.07	0.02	0.36	0.07	0.02
Finished Material (Empty Grease)	0.20	0.04	0.01	0.18	0.04	0.01	0.18	0.04	0.01
<b>Totals</b>	<b>17.85</b>	<b>3.57</b>	<b>0.88</b>	<b>16.32</b>	<b>3.26</b>	<b>0.80</b>	<b>16.32</b>	<b>3.26</b>	<b>0.80</b>

**Methodology**

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] \* [Maximum trips per day (trip/day)]  
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]  
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] \* [Maximum one-way distance (mi/trip)]  
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]  
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]  
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Unmitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)  
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Mitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)  
Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] \* [1 - Dust Control Efficiency]

**Abbreviations**

PM = Particulate Matter  
PM10 = Particulate Matter (<10 um)  
PM2.5 = Particle Matter (<2.5 um)  
PTE = Potential to Emit



# Indiana Department of Environmental Management

*We Protect Hoosiers and Our Environment.*

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • [www.idem.IN.gov](http://www.idem.IN.gov)

**Michael R. Pence**  
Governor

**Carol S. Comer**  
Commissioner

December 19, 2016

Jim Davis  
Darling Ingredients Inc  
7358 S Griffin Rd  
Newberry, IN 47449Re:

Public Notice  
Darling Ingredients Inc  
Permit Level: FESOP  
Permit Number: 055-37321-00008

Dear Mr. Davis:

Enclosed is a copy of your draft FESOP, Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has prepared two versions of the Public Notice Document. The abbreviated version will be published in the newspaper, and the more detailed version will be made available on the IDEM's website and provided to interested parties. Both versions are included for your reference. The OAQ has requested that the Greene County Daily World in Linton, Indiana publish the abbreviated version of the public notice no later than Wednesday December 21, 2016. You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper.

OAQ has submitted the draft permit package to the Bloomfield Greene Public Library, 125 S Franklin Street in Bloomfield, Indiana. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Joshua Levering, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 4-6543 or dial (317) 234-6543

Sincerely,  
**Catherine Denny**  
Permits Branch  
Office of Air Quality

Enclosures  
PN Applicant Cover letter 2/17/2016



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**Michael R. Pence**  
*Governor*

**Carol S. Comer**  
*Commissioner*

## **ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING**

December 16, 2016

*The Green County Daily World*  
79 South Main  
P.O. Box 129  
Linton, Indiana 47441

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for Darling Ingredients Inc in Greene County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than Wednesday, December 21, 2016.

Please send a notarized form, clippings showing the date of publication, and the billing to the Indiana Department of Environmental Management, Accounting, Room N1345, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

**To ensure proper payment, please reference account # 100174737.**

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Catherine Denny at 800-451-6027 and ask for extension 4-5256 or dial 317-234-5256.

Sincerely,  
***Catherine Denny***  
Permit Branch  
Office of Air Quality

Permit Level: FESOP  
Permit Number: 055-37321-00008

Enclosure

PN Newspaper.dot 2/17/2016



# Indiana Department of Environmental Management

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**Michael R. Pence**  
*Governor*

**Carol S. Comer**  
*Commissioner*

December 19, 2016

To: Bloomfield Eastern Greene County Public Library

From: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

**Applicant Name: Darling Ingredients Inc**  
**Permit Number: 055-37321-00008**

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. **Please make this information readily available until you receive a copy of the final package.**

If you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures  
PN Library.dot 2/17/2016



# Indiana Department of Environmental Management

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(800) 451-6027 • (317) 232-8603 • [www.idem.IN.gov](http://www.idem.IN.gov)

**Michael R. Pence**  
Governor

**Carol S. Comer**  
Commissioner

## Notice of Public Comment

**December 19, 2016**  
**Darling Ingredients Inc.**  
**055-37321-00008**

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

**Please Note:** *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at [PPEAR@IDEM.IN.GOV](mailto:PPEAR@IDEM.IN.GOV). If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure  
PN AAA Cover.dot 2/17/2016

# Mail Code 61-53

IDEM Staff	CDENNY 12/19/2016 Darling Ingredients Inc 055-37321-00008 (draft)		Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Jim Davis Darling Ingredients Inc 7358 S Griffin Rd Newberry IN 47449 (Source CAATS)										
2		Brandon Lairmore Regional VP Darling Ingredients Inc 7358 S Grffin Rd Newberry IN 47449 (RO CAATS)										
3		Bloomfield Eastern Greene Co Public Library 125 S Franklin St Bloomfield IN 47424-1406 (Library)										
4		Greene County Health Department 217 East Spring Street #1 Bloomfield IN 47424-1440 (Health Department)										
5		Bledsoe Resident 411 N. Co. Road 525 E. Sullivan IN 47882 (Affected Party)										
6		Jasonville City Council and Mayors Office 304 W. Main St. Jasonville IN 47438 (Local Official)										
7		Newberry Town Council P.O. Box 7 Newberry IN 47449 (Local Official)										
8		Greene County Board of Commissioners Court house Square #133 C/O Auditor office Bloomfield IN 47424 (Local Official)										
9		Mr. Kevin Keller 761 Walnut Street Newberry IN 47449 (Affected Party)										
10		Rodney & Lisa Beatty 1939 S 1100 W Linton IN 47441 (Affected Party)										
11												
12												
13												
14												
15												

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See <b>Domestic Mail Manual R900, S913, and S921</b> for limitations of coverage on inured and COD mail. See <b>International Mail Manual</b> for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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