

James Hoyt  
A. E. Staley Manufacturing Company  
2200 East Eldorado Street  
Decatur, IL 62525

Re: 157-11449-00033  
Significant Source Modification to  
Part 70 Permit 157-6008-00033

Dear Mr. Hoyt:

A. E. Staley Manufacturing Company submitted a Part 70 operation permit application on May 31, 1996 for a grain processing plant located at 3300 U.S. 52 South, Lafayette, IN 47905. An application to modify the source was received on October 12, 1999. The request was made make changes to the method of operation which will increase the corn wet milling capacity of the plant. Pursuant to the provisions of 326 IAC 2-7-12 a significant source modification to this permit is hereby approved as described in the attached Technical Support Document.

Construction Permit 157-3581-00033, which was issued on February 27, 1995 and amended on May 6, 1996, has been incorporated into this proposed Significant Source Modification approval. This proposed approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). If there are no changes to the proposed construction of the emission units, the source may begin operating on the date that IDEM receives an affidavit of construction pursuant to 326 IAC 2-7-10.5(h). If there are any changes to the proposed construction the source can not operate until an Operation Permit Validation Letter is issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Allen R. Davidson at (800) 451-6027, press 0 and ask for extension 3-5693, or dial (317) 233-5693.

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Management

Attachments  
ARD

cc: File - Tippecanoe County  
U.S. EPA, Region V  
Tippecanoe County Health Department  
Air Compliance Section Inspector - Eric Courtright  
Compliance Data Section - Melinda Jones  
Administrative and Development - Janet Mobley  
Technical Support and Modeling - Michele Boner

**SIGNIFICANT SOURCE MODIFICATION  
PART 70 OPERATING PERMIT  
OFFICE OF AIR MANAGEMENT**

**A. E. Staley Manufacturing Company  
3300 U.S. 52 South  
Lafayette, IN 47905**

(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.

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 2-7 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.

Operation Permit No.: 157-11449-00033	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance 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 Management (OAM). 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 2-7-4(c)] [326 IAC 2-7-5(15)]

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The Permittee owns and operates a grain processing plant.

Responsible Official: Timothy A. Bauer  
Source Address: 3300 U.S. 52 South, Lafayette, IN 47905  
Mailing Address: 2200 East Eldorado Street, Decatur, IL 62525  
Phone Number: 217-423-4411  
SIC Code: 2046  
County Location: Tippecanoe  
County Status: Attainment for all criteria pollutants  
Source Status: Part 70 Permit Program  
Major Source, under PSD Rules  
Major Source, Section 112 of the Clean Air Act

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This source modification involves the following emission units and pollution control devices:

- (a) One (1) coal-fired boiler rated at 239 million BTU per hour, identified as LA-45. Particulate emissions are controlled by a multi-clone collector followed in series by an electrostatic precipitator. Under the normal operating scenario, sulfur dioxide emissions are controlled by scrubbers LA-67 and/or LA-68 and emissions are then exhausted at stack S/V #4. Under an alternative scenario, emissions bypass scrubbers LA-67 and/or LA-68 and vent through stack S/V #4.
- (b) One (1) fiber dryer identified as LA-8. Particulate emissions and sulfur dioxide emissions are controlled by a wet scrubber identified as LA-67. VOC emissions are also controlled by LA-67. Emissions are then exhausted at Stack S/V #4.
- (c) One DSLC dryer identified as LA-17A. Particulate emissions are controlled by one (1) cyclone in series with one (1) wet scrubber identified as LA-67. Sulfur dioxide and VOC emissions are also controlled by LA-67. Emissions are then exhausted at Stack S/V #4.
- (d) One feed cooler identified as LA-17B. Particulate emissions are controlled by one (1) cyclone in series with one (1) wet scrubber identified as LA-17B. Emissions are then exhausted at Stack S/V #4.
- (e) One (1) gluten dryer identified as LA-15. Particulate emissions and sulfur dioxide emissions are controlled by a wet scrubber identified as LA-68. VOC emissions are also controlled by LA-68. Emissions are then exhausted at Stack S/V #4.
- (f) One (1) germ dryer identified as LA-60. Particulate emissions are controlled by a cyclone in series with a wet scrubber identified as LA-69. Sulfur dioxide and VOC emissions are also controlled by LA-69. Emissions are then exhausted at Stack S/V #4.

- (g) One (1) GR dryer identified as LA-47. Particulate emissions are controlled by two cyclones in series with a wet scrubber identified as LA-69. Sulfur dioxide and VOC emissions are also controlled by LA-69. Emissions are then exhausted at Stack S/V #4.
- (h) One (1) starch jets foam trap identified as LA-75. Under the normal operating scenario, all emissions are reclaimed. Under an alternative scenario, emissions are vented through Stack S/V #48.
- (i) Two (2) outdoor steep tanks identified as LA-62C and LA-62D, with emissions vented through Stacks S/V #55 and S/V #56, respectively.
- (j) One (1) pellet cooler / pellet bucket elevator aspiration system identified as LA-49, with particulate emissions controlled by one (1) primary cyclone in series with one (1) secondary cyclone, then vented through Stack S/V #13.
- (k) One (1) pellet cooler identified as LA-63, with particulate emissions controlled by one (1) primary cyclone in series with one (1) secondary cyclone, then vented through Stack S/V #42.
- (l) One (1) pellet hammermill aspiration system identified as LA-77, with emissions controlled by a wet scrubber then vented through Stack S/V #54.
- (m) One (1) feedhouse aspiration system identified as LA-71. Sulfur dioxide and VOC emissions are controlled by a wet scrubber identified as LA-71. Emissions are then exhausted at stack S/V #4.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This source modification also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Paved roads and parking lots with public access.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because it is a major source, as defined in 326 IAC 2-7-1(22).

## SECTION B GENERAL CONDITIONS

### B.1 Permit No Defense [IC 13]

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- (a) 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 Part 70 permit under 326 IAC 2-7.
- (b) This prohibition shall not apply to alleged violations of applicable requirements for which the Commissioner has granted a permit shield in accordance with 326 IAC 2-7-15, as set out in this permit in the Section B condition entitled "Permit Shield."

### B.2 Definitions [326 IAC 2-7-1]

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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, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

### B.3 Permit Term [326 IAC 2-7-5(2)]

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This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3.

### B.4 Enforceability [326 IAC 2-7-7(a)]

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

### B.5 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

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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 2-7-3 and 326 IAC 2-7-4(a).

### B.6 Severability [326 IAC 2-7-5(5)]

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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.7 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

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

### B.8 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)]

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- (a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall furnish to IDEM, OAM within a reasonable time, any information that IDEM, OAM 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.
- (c) Upon request, and within a reasonable time thereafter, the Permittee shall also furnish to IDEM, OAM, copies of records required to be kept by this permit. If the Permittee wishes to assert a claim of confidentiality over any of the furnished records, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17. If requested by IDEM, OAM or the U.S. EPA to furnish copies of requested records directly to U. S. EPA, then the Permittee must furnish such records directly to the U.S. EPA. If the Permittee wishes to assert a claim of confidentiality regarding the furnished records, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit, except those specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act and is grounds for:
  - (1) Enforcement action;
  - (2) Permit termination, revocation and reissuance, or modification; or
  - (3) Denial of a permit renewal application.
- (b) 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.

B.10 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted under this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, on the attached Certification Form, with each submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

B.11 Annual Compliance Certification [326 IAC 2-7-6(5)]

- (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 certification shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

- (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, OAM on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The 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 compliance of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3).

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.12 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]  
[326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this permit, 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;
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP 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 Branch, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM.

B.13 Emergency Provisions [326 IAC 2-7-16]

- (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 2-7-16.
- (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, OAM 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 Management,  
Compliance Section), or  
Telephone Number: 317-233-5674 (ask for Compliance Section)  
Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted notice, either in writing or facsimile, of the emergency to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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 2-7-5(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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAM may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAM by telephone or facsimile of an emergency lasting more than one (1) hour in compliance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 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 materials of substantial economic value.

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

**B.14 Permit Shield [326 IAC 2-7-15]**

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- (a) This condition provides a permit shield as addressed in 326 IAC 2-7-15.
- (b) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. Compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that:
  - (1) The applicable requirements are included and specifically identified in this permit; or
  - (2) The permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable.
- (c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAM shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (d) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (e) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
  - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
  - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
  - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
  - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (f) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAM has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAM has issued the modification. [326 IAC 2-7-12(b)(7)]

B.15 Multiple Exceedances [326 IAC 2-7-5(1)(E)]

Any exceedance of a permit limitation or condition contained in this permit, which occurs contemporaneously with an exceedance of an associated surrogate or operating parameter established to detect or assure compliance with that limit or condition, both arising out of the same act or occurrence, shall constitute a single potential violation of this permit.

B.16 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

within ten (10) calendar days from the date of the discovery of the deviation.

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

- (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
- (2) An emergency as defined in 326 IAC 2-7-1(12); or
- (3) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.
- (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

- (c) Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification does not need to be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.

B.17 Permit Modification, Reopening, Revocation and Reissuance, or Termination  
[326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 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 2-7-5(6)(C)]

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAM 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 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAM 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 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAM at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAM may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.18 Permit Renewal [326 IAC 2-7-4]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAM and shall include the information specified in 326 IAC 2-7-4. 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(40).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]
  - (1) A timely renewal application is one that is:
    - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
    - (B) 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, OAM on or before the date it is due.
  - (2) If IDEM, OAM, upon receiving a timely and complete 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, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

- (c) **Right to Operate After Application for Renewal** [326 IAC 2-7-3]  
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 2-7 until IDEM, OAM, 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 in writing by IDEM, OAM, any additional information identified as being needed to process the application.
- (d) **United States Environmental Protection Agency Authority** [326 IAC 2-7-8(e)]  
If IDEM, OAM fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

**B.19 Permit Amendment or Modification** [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 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  
Permits Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
  
Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule.
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**B.20 Permit Revision Under Economic Incentives and Other Programs** [326 IAC 2-7-5(8)]  
[326 IAC 2-7-12 (b)(2)]

- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

**B.21 Operational Flexibility** [326 IAC 2-7-20]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), 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 2-1.1 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under 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  
Permits Branch, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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 which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAM in the notices specified in 326 IAC 2-7-20(b), (c)(1), and (e)(2).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a) and the following additional conditions:

(1) The permit shield, described in 326 IAC 2-7-15, shall not apply to any change made under 326 IAC 2-7-20(b).

(2) For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(i) A brief description of the change within the source;

(ii) The date on which the change will occur;

(iii) Any change in emissions; and

(iv) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(c)]

The Permittee may trade increases and decreases in emissions in 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 2-7-20(c).

- (d) **Alternative Operating Scenarios [326 IAC 2-7-20(d)]**  
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 2-7-5(9). No prior notification of IDEM, OAM, or U.S. EPA is required.
- (e) 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.22 Construction Permit Requirement [326 IAC 2]**

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A modification, construction, or reconstruction is governed by 326 IAC 2 and 326 IAC 2-7-10.5.

**B.23 Inspection and Entry [326 IAC 2-7-6(2)]**

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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, OAM U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.  
[326 IAC 2-7-6(6)]

**B.24 Transfer of Ownership or Operational Control [326 IAC 2-7-11]**

- 
- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 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  
Permits Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**B.25 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]**

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- (a) The Permittee shall pay annual fees to IDEM, OAM within thirty (30) calendar days of receipt of a billing. If the Permittee does not receive a bill from IDEM, OAM, the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), 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 317-233-0425 (ask for OAM, Technical Support and Modeling Section), to determine the appropriate permit fee.

**B.26 Advanced Source Modification Approval [326 IAC 2-7-5(16)]**

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The requirements to obtain a source modification approval under 326 IAC 2-7-10.5 or a permit modification under 326 IAC 2-7-12 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3 if such modifications occur during the term of this permit.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), 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.2 Open Burning [326 IAC 4-1] [IC 13-17-9]

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. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

#### C.3 Incineration [326 IAC 4-2][326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. The provisions of 326 IAC 9-1-2 are not federally enforceable.

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

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). 326 IAC 6-4-2(4) is not federally enforceable.

#### C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided in this permit, any air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that an emission unit vented to it is in operation.

#### C.6 Stack Height [326 IAC 1-7]

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.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]

All demolition projects require notification whether or not asbestos is present.

- (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.
- (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  
Asbestos Section, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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 14-10-4, 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) **Indiana Accredited 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 Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

### **Testing Requirements [326 IAC 2-7-6(1)]**

#### **C.8 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

### **Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

#### **C.9 Compliance Schedule [326 IAC 2-7-6(3)]**

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The Permittee:

- (a) Has certified that all facilities at this source are in compliance with all applicable requirements; and
- (b) Has submitted a statement that the Permittee will continue to comply with such requirements; and
- (c) Will comply with such applicable requirements that become effective during the term of this permit.

#### **C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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Compliance with applicable requirements shall be documented as required by this permit. All monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, 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 Branch, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.11 Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation.
- (b) In the case of continuous monitoring other than opacity, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.
- (c) In the case of continuous opacity monitoring, whenever the continuous opacity monitor is malfunctioning or will be down for repairs or adjustments for a period of four (4) hours or more, visible emission readings should be performed in accordance with 40 CFR 60, Appendix A, Method 9, beginning four (4) hours after the start of the malfunction or down time for a minimum of one (1) hour.
- (c) If the reading period begins less than one hour before sunset, readings shall be performed until sunset. If the first required reading period would occur between sunset and sunrise, the first reading shall be performed as soon as there is sufficient daylight.
- (d) Method 9 opacity readings shall be repeated for a minimum of one (1) hour at least once every four (4) hours during daylight operations, until such time that the continuous opacity monitor is back in operation.
- (e) The opacity readings during this period shall be reported in the quarterly Compliance Monitoring Reports, unless there are ANY observed six minute averaged exceedances, in which case, these shall be reported to the air compliance inspector within four (4) working hours.
- (f) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt response steps shall be initiated whenever indicated.

C.12 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.13 Pressure Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.

### **Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

#### **C.14 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 Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

within ninety (90) days after the date of issuance of this permit.

The ERP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) If the ERP is disapproved by IDEM, OAM, 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, OAM 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.15 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]**

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If a regulated substance subject to 40 CFR 68 is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall:

(a) Submit:

(1) A compliance schedule for meeting the requirements of 40 CFR 68 by the date provided in 40 CFR 68.10(a); or

(2) As a part of the compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and

(3) A verification to IDEM, OAM that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.

(b) Provide annual certification to IDEM, OAM that the Risk Management Plan is being properly implemented.

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.16 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]  
[326 IAC 1-6]

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- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
- (1) This condition;
  - (2) The Compliance Determination Requirements in Section D of this permit;
  - (3) The Compliance Monitoring Requirements in Section D of this permit;
  - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
  - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :
    - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
    - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
- (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
  - (3) An automatic measurement was taken when the process was not operating; or

- (4) The process has already returned to operating within “normal” parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

**C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
[326 IAC 2-7-6]**

- (a) If 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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the response actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the response actions taken are deficient. The Permittee shall submit a description of additional response actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline.
- (c) IDEM, OAM reserves the authority to take any actions allowed under law to resolve noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]**

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
  - (1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
  - (2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (c) The annual emission statement 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, OAM on or before the date it is due.

C.19 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept 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) Records of required monitoring information shall include, where specified in Section D:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;
  - (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and

- (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where specified in Section D:
  - (1) Copies of all reports required by this permit;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.21 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015
- (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, OAM on or before the date it is due.
- (d) Unless otherwise specified in this permit, any report shall be submitted within thirty (30) days of the end of the reporting period. Such reports do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports. The Emergency/Deviation Occurrence Report does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (f) Any response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

## **Stratospheric Ozone Protection**

### **C.22 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 the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

One (1) coal-fired boiler rated at 239 million BTU per hour, identified as LA-45. Particulate emissions are controlled by a multi-clone collector followed in series by an electrostatic precipitator. Under the normal operating scenario, sulfur dioxide emissions are controlled by scrubbers LA-67 and/or LA-68 and emissions are then exhausted at stack S/V #4. Under an alternative scenario, emissions bypass scrubbers LA-67 and/or LA-68 and vent through stack S/V #4.

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 Particulate Matter Limitation (PM) [326 IAC 6-2-3] [326 IAC 2-2]

Particulate emissions from this facility shall not exceed 0.2 pounds per million British thermal units (BTU) heat input. Compliance with this limit will satisfy the requirements of 6-2-3(d). Compliance with this condition will provide an emission credit which may be used at a future date pursuant to 326 IAC 2-2.

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

The SO<sub>2</sub> emissions from this facility shall not exceed six (6.0) pounds per million BTU heat input before controls. Compliance with this limit will satisfy the requirements of 326 IAC 7-1.1.

For coal with an average heat content of 11,000 BTU per pound, this limit equates to a maximum sulfur content of 3.47% to comply with the limit.

#### D.1.3 Sulfur Dioxide Emission Limitations

Sulfur dioxide emissions from the New Dryers Wet Scrubber System, which includes LA-67 and LA-68, shall be limited in accordance with Section D.6 of this permit.

#### D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control devices.

### Compliance Determination Requirements

#### D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this Permit.

#### D.1.6 Standard Operating Procedures [326 IAC 3-7-5]

(a) The Permittee shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and reporting of fuel sampling and analysis data.

(b) Any revision to the SOP shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.1.7 Continuous Opacity Monitor (COM) Required [326 IAC 3-5]**

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A continuous opacity monitor shall be installed and shall be operated at all times when this facility is in operation.

**D.1.8 Fuel Sampling Requirements [326 IAC 7-2-1(e)]**

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- (a) Fuel sampling and analysis data shall be collected pursuant to the procedures specified in 326 IAC 3-7-2 or 3-7-3.
- (b) Computation of calculated sulfur dioxide emission rates from the fuel sampling and analysis data shall be based on the emission factors contained in U.S. EPA publication AP-42, "Compilation of Air Pollutant Emission Factors."

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**D.1.9 Record Keeping Requirements**

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The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

**D.1.10 Coal Fuel Usage Data Reports [326 IAC 7-2-1]**

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Pursuant to 326 IAC 7-2-1(c)(2), the Permittee shall submit quarterly reports of the calendar-month average sulfur content and heat content, fuel consumption for the month, and the sulfur dioxide emission rate for the month.

**D.1.11 Reporting Requirements**

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A quarterly summary of the information to document compliance shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

## SECTION D.2

## FACILITY OPERATION CONDITIONS

### **Facility Description [326 IAC 2-7-5(15)]:**

One (1) starch jets foam trap identified as LA-75. Under the normal operating scenario, all emissions are reclaimed. Under an alternative scenario, emissions are vented through Stack S/V #48.

### **Emission Limitations and Standards [326 IAC 2-7-5(1)]**

#### **D.2.1 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1]**

This rule was determined to be applicable. However, there are no limits specifically applicable to this facility.

#### **D.2.2 Prevention of Significant Deterioration [326 IAC 2-2]**

This facility shall be limited to 21,000,000 pounds of steam vented under the alternate operating scenario per 12-month period, based on a monthly rolling total. This limit will control the sulfur dioxide emissions increase to less than 40 tons per year. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements will not apply.

### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### **D.2.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]**

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### **D.2.4 Record Keeping Requirements**

Records shall be made and kept of the total pounds of steam vented per calendar month from this facility.

#### **D.2.5 Reporting Requirements**

A quarterly summary of the information to document compliance shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

### SECTION D.3

### FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(15)]:**

Two (2) outdoor steep tanks identified as LA-62C and LA-62D, with emissions vented through Stacks S/V #55 and S/V #56, respectively.

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.3.1 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]**

The VOC potential emissions from this facility are less than 25 tons per year. Therefore, the best available control technology (BACT) requirement in 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) does not apply.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.3.2 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]**

The Permittee is not required to test this facility by this permit.

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**D.3.3 Record Keeping Requirements**

There are no specific record keeping requirements for this facility.

**D.3.4 Reporting Requirements**

There are no specific reporting requirements for this facility.

## SECTION D.4 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

One (1) pellet cooler / pellet bucket elevator aspiration system identified as LA-49, with particulate emissions controlled by one (1) primary cyclone in series with one (1) secondary cyclone, then vented through Stack S/V #13.

One (1) pellet cooler identified as LA-63, with particulate emissions controlled by one (1) primary cyclone in series with one (1) secondary cyclone, then vented through Stack S/V #42.

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.4.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the particulate matter emissions shall not exceed the pound per hour emission rate established as E in the following formula:

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

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

#### D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and control devices.

### Compliance Determination Requirements

#### D.4.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM and PM-10 testing utilizing EPA methods approved by the Commissioner. In the event that separate PM and PM-10 tests are not performed, PM-10 must be assumed at 100% of PM.

### Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

#### D.4.4 Control Device Inspections

An inspection shall be performed of the control devices at least once per year.

### Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

#### D.4.5 Record Keeping Requirements

- (a) To document compliance, the Permittee shall maintain a log of operation and preventive maintenance logs (including work purchase orders), and those additional inspections prescribed by the Preventative Maintenance Plan.
- (b) The maximum production capacity of LA-63, which has been claimed as confidential information, shall be kept at the emission source for the life of the facility and made available to visiting inspectors upon request.
- (c) All records other than maximum production capacity shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.4.6 Reporting Requirements

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A quarterly summary of the information to document compliance shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the period being reported.

## SECTION D.5 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

One (1) pellet hammermill aspiration system, identified as LA-77, with emissions controlled by a wet scrubber then vented through Stack S/V #54.

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.5.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the particulate matter emissions shall not exceed the pound per hour emission rate established as E in the following formula:

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

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

#### D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this control device.

### Compliance Determination Requirements

#### D.5.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit.

### Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

#### D.5.4 Monitoring Requirements

To document compliance, the scrubbant flow rate shall not average less than 25 gallons per minute based on a twelve-reading average.

### Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

#### D.5.5 Record Keeping Requirements

- (a) Records of the scrubbant flow rate shall be taken hourly and the average checked at least once per shift.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.5.6 Reporting Requirements

There are no specific reporting requirements for this facility.

## SECTION D.6 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

One (1) fiber dryer identified as LA-8. Particulate emissions and sulfur dioxide emissions are controlled by a wet scrubber identified as LA-67. VOC emissions are also controlled by LA-67. Emissions are then exhausted at Stack S/V #4.

One DSLC dryer identified as LA-17A. Particulate emissions are controlled by one (1) cyclone in series with one (1) wet scrubber identified as LA-67. Sulfur dioxide and VOC emissions are also controlled by LA-67. Emissions are then exhausted at Stack S/V #4.

One (1) gluten dryer identified as LA-15. Particulate emissions and sulfur dioxide emissions are controlled by a wet scrubber identified as LA-68. VOC emissions are also controlled by LA-68. Emissions are then exhausted at Stack S/V #4.

One (1) germ dryer identified as LA-60. Particulate emissions are controlled by a cyclone in series with a wet scrubber identified as LA-69. Sulfur dioxide and VOC emissions are also controlled by LA-69. Emissions are then exhausted at Stack S/V #4.

One (1) GR dryer identified as LA-47. Particulate emissions are controlled by two cyclones in series with a wet scrubber identified as LA-69. Sulfur dioxide and VOC emissions are also controlled by LA-69. Emissions are then exhausted at Stack S/V #4.

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.6.1 Particulate Matter (PM) Emission Limitations

- (a) Particulate matter emissions from LA-67 shall be limited to 20.36 pounds per hour after controls.
- (b) Particulate matter emissions from LA-68 shall be limited to 26.06 pounds per hour after controls.
- (c) Particulate matter emissions from LA-69 shall be limited to 14.7 pounds per hour after controls.

#### D.6.2 Sulfur Dioxide Emission Limitations

Pursuant to permit CP 157-3581, issued on February 27, 1995, sulfur dioxide concentrations from the New Dryers Wet Scrubber System, which includes LA-67, LA-68 and LA-69, shall be limited to 187 parts per million after controls. For a combined air flow rate of 353,600 acf/min at a temperature of 138EF, this limit equates to a total of 582 pounds of sulfur dioxide per hour from LA-67, LA-68 and LA-69.

#### D.6.3 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (New Facilities: General Reduction Requirements), volatile organic compounds from dryers LA-15 and LA-60 shall be controlled by wet scrubbers having 45% overall VOC removal efficiency.

#### D.6.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control devices.

#### D.6.5 Control Device Inspections

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An inspection shall be performed of the control devices at least once each year.

### Compliance Determination Requirements

#### D.6.6 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

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During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM, PM-10, SO<sub>2</sub> and VOC testing utilizing EPA methods approved by the Commissioner. In the event that separate PM and PM-10 tests are not performed, PM-10 must be assumed at 100% of PM.

### Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

#### D.6.7 Monitoring Requirements

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- (a) To document compliance, the pH concentration of the recycled water from scrubbers LA-67, LA-68, and LA-69 shall not be less than 5.0 and shall average not less than 7.0 based on twelve one-hour pH levels recorded during each shift.
- (b) The scrubbant flow rates for the gaseous and particulate sections of LA-67 shall not average less than 1000 gallons per minute and 200 gallons per minute, respectively, based on a twelve-reading average.
- (c) The scrubbant flow rates of LA-68 shall not average less than 200 gallons per minute based on a twelve-reading average.
- (d) The scrubbant flow rates for the gaseous and particulate sections of LA-69 shall not average less than 500 gallons per minute and 100 gallons per minute, respectively, based on a twelve-reading average.

### Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

#### D.6.8 Record Keeping Requirements

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- (a) To document compliance, the Permittee shall maintain a log of hourly recorded pH values and preventive maintenance logs (including work purchase orders), and those additional inspections prescribed by the Preventative Maintenance Plan.
- (b) Records of the scrubbant flow rate shall be taken hourly and the average checked at least once per shift.
- (c) The maximum production capacity of LA-8, LA-17A, LA-15, LA-60, and LA-47, which have been claimed as confidential information, shall be kept at the emission source for the life of the facility and made available to visiting inspectors upon request.
- (d) All records other than maximum production capacity shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.6.9 Reporting Requirements

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A quarterly summary of the information to document compliance shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

## SECTION D.7 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

One feed cooler identified as LA-17B. Particulate matter emissions are controlled by one (1) cyclone in series with one (1) wet scrubber identified as LA-17B. Emissions are then exhausted at Stack S/V #4.

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.7.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the particulate matter emissions shall not exceed the pound per hour emission rate established as E in the following formula:

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

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

#### D.7.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this control device.

### Compliance Determination Requirements

#### D.7.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit.

### Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

#### D.7.4 Monitoring Requirements

To document compliance, the scrubbant flow rate shall not average less than 175 gallons per minute based on a twelve-reading average.

### Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

#### D.7.5 Record Keeping Requirements

- (a) Records of the scrubbant flow rate shall be taken hourly and the average checked at least once per shift.
- (b) The maximum production capacity of LA-17B, which has been claimed as confidential information, shall be kept at the emission source for the life of the facility and made available to visiting inspectors upon request.
- (c) All records other than maximum production capacity shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.7.6 Reporting Requirements

There are no specific reporting requirements for this facility.

## SECTION D.8 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

One (1) feedhouse aspiration system identified as LA-71. Sulfur dioxide and VOC emissions are controlled by a wet scrubber identified as LA-71. Emissions are then exhausted at stack S/V #4.

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.8.1 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1]

This rule was determined to be applicable. However, there are no limits specifically applicable to this facility.

#### D.8.2 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

This facility is a control device. It does not control any facilities that were constructed after January 1, 1980. Therefore, the best available control technology (BACT) requirement in 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) does not apply.

#### D.8.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this control device.

#### D.8.4 Control Device Inspections

An inspection shall be performed of the control device at least once each year.

### Compliance Determination Requirements

#### D.8.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit.

### Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

#### D.8.6 Monitoring Requirements

To document compliance, the pH concentration of the recycled water from the scrubber shall not be less than 5.0 and shall average not less than 7.0 based on twelve one-hour pH levels recorded during each shift.

### Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

#### D.8.7 Record Keeping Requirements

- (a) To document compliance, the Permittee shall maintain a log of hourly recorded pH values and preventive maintenance logs (including work purchase orders), and those additional inspections prescribed by the Preventive Maintenance Plan.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.8.8 Reporting Requirements

A quarterly summary of the information to document compliance shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR MANAGEMENT COMPLIANCE DATA SECTION

### PART 70 OPERATING PERMIT CERTIFICATION

Source Name: A. E. Staley Manufacturing Company  
Source Address: 3300 U.S. 52 South, Lafayette, IN 47905  
Mailing Address: 2200 East Eldorado Street, Decatur, IL 62525  
Part 70 Permit No.: 157-11449-00033

**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:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) \_\_\_\_\_
- 9 Report (specify) \_\_\_\_\_
- 9 Notification (specify) \_\_\_\_\_
- 9 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 MANAGEMENT  
COMPLIANCE DATA SECTION  
P.O. Box 6015  
100 North Senate Avenue  
Indianapolis, Indiana 46206-6015  
Phone: 317-233-5674  
Fax: 317-233-5967**

**PART 70 OPERATING PERMIT  
EMERGENCY/DEVIATION OCCURRENCE REPORT**

Source Name: A. E. Staley Manufacturing Company  
Source Address: 3300 U.S. 52 South, Lafayette, IN 47905  
Mailing Address: 2200 East Eldorado Street, Decatur, IL 62525  
Part 70 Permit No.: 157-11449-00033

**This form consists of 2 pages**

**Page 1 of 2**

Check either No. 1 or No.2	
<input checked="" type="radio"/>	1. This is an emergency as defined in 326 IAC 2-7-1(12) c The Permittee must notify the Office of Air Management (OAM), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and c The Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16
<input checked="" type="radio"/>	2. This is a deviation, reportable per 326 IAC 2-7-5(3)(C) c The Permittee must submit notice in writing within ten (10) calendar days

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/Deviation:
Describe the cause of the Emergency/Deviation:

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

Page 2 of 2

Date/Time Emergency/Deviation started:
Date/Time Emergency/Deviation was corrected:
Was the facility being properly operated at the time of the emergency/deviation?    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/deviation:
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 MANAGEMENT  
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT  
QUARTERLY COMPLIANCE MONITORING REPORT**

Source Name: A. E. Staley Manufacturing Company  
Source Address: 3300 U.S. 52 South, Lafayette, IN 47905  
Mailing Address: 2200 East Eldorado Street, Decatur, IL 62525  
Part 70 Permit No.: 157-11449-00033

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

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted quarterly. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Compliance Monitoring Requirement (e.g. Permit Condition D.1.3)	Number of Deviations	Date of each Deviation

Form Completed By: \_\_\_\_\_  
Title/Position: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR MANAGEMENT  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: A. E. Staley Manufacturing Company  
 Source Address: 3300 U.S. 52 South, Lafayette, IN 47905  
 Mailing Address: 2200 East Eldorado Street, Decatur, IL 62525  
 Part 70 Permit No.: 157-11449-00033  
 Facility: LA-45 (239 Million BTU Coal-Fired Boiler)  
 Parameter: Average Sulfur Content, Average Heat Content, Fuel Usage, SO<sub>2</sub> Emission Rate  
 Limits: 6.0 lb SO<sub>2</sub> per million BTU heat input before controls.  
 (Controls estimated at 50% efficiency but are not continuously required.)

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

Month	Avg. Sulfur Content (%)	Avg. Heat Content(BTU/lb)	Coal Used This Month (Tons)	SO <sub>2</sub> Emission Before Controls (lb/million BTU)	SO <sub>2</sub> Emission After Controls (lb/million BTU)

- 9 No deviation from the limit occurred in this quarter.
- 9 Deviations occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

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

Signature: \_\_\_\_\_

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

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

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR MANAGEMENT  
 COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: A. E. Staley Manufacturing Company  
 Source Address: 3300 U.S. 52 South, Lafayette, IN 47905  
 Mailing Address: 2200 East Eldorado Street, Decatur, IL 62525  
 Part 70 Permit No.: 157-11449-00033  
 Facility: LA-75 (Jet Foam Trap)  
 Parameter: Alternative Operating Scenario (involves venting of SO<sub>2</sub> to Stack S/V #48)  
 Limit: 21,000,000 pounds of steam vented per 12-month period.

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

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total

- 9 No deviation from the limit occurred in this quarter.
- 9 Deviations occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

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

Signature: \_\_\_\_\_

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

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

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

Technical Support Document (TSD) for a Significant Source Modification to a Part 70 Operating Permit

### Source Background and Description

<b>Source Name:</b>	<b>A. E. Staley Manufacturing Company</b>
<b>Source Location:</b>	<b>3300 U.S. 52 South, Lafayette, IN 47905</b>
<b>County:</b>	<b>Tippecanoe</b>
<b>SIC Code:</b>	<b>2046</b>
<b>Operation Permit No.:</b>	<b>157-6008-00033</b>
<b>Revision No.:</b>	<b>157-11449-00033</b>
<b>Permit Reviewer:</b>	<b>Allen R. Davidson</b>

On October 12, 1999, the Office of Air Management (OAM) received an application from A. E. Staley Manufacturing Company relating to an increase in production capacity of corn wet milling at the "South Lafayette Plant"

The following equipment will be added to the plant:

- (a) Two (2) outdoor steep tanks identified as LA-62C and LA-62D, with emissions vented through Stacks S/V #55 and S/V #56, respectively.
- (b) One (1) pellet hammermill aspiration system identified as LA-77, with emissions controlled by a wet scrubber then vented through Stack S/V #54.

The following equipment is existing but will be affected by this application:

- (c) One (1) coal-fired boiler rated at 239 million BTU per hour, identified as LA-45. Particulate emissions are controlled by a multi-clone collector followed in series by an electrostatic precipitator. Under the normal operating scenario, sulfur dioxide emissions are controlled by scrubbers LA-67 and/or LA-68 and emissions are then exhausted at stack S/V #4. Under an alternative scenario, emissions bypass the scrubbers LA-67 and/or LA-68 and vent through stack S/V #4.
- (d) One (1) fiber dryer identified as LA-8. Particulate emissions and sulfur dioxide emissions are controlled by a wet scrubber identified as LA-67. VOC emissions are also controlled by LA-67. Emissions are then exhausted at Stack S/V #4.
- (e) One DSLC dryer identified as LA-17A. Particulate matter emissions are controlled by one (1) cyclone in series with one (1) wet scrubber identified as LA-67. Sulfur dioxide and VOC emissions are also controlled by LA-67. Emissions are then exhausted at Stack S/V #4.
- (f) One feed cooler identified as LA-17B. Particulate matter emissions are controlled by one (1) cyclone in series with one (1) wet scrubber identified as LA-17B. Emissions are then exhausted at Stack S/V #4.
- (g) One (1) gluten dryer identified as LA-15. Sulfur dioxide emissions are controlled by a wet scrubber identified as LA-68. VOC emissions are also controlled by LA-68. Emissions are then exhausted at Stack S/V #4.

- (h) One (1) germ dryer identified as LA-60. Particulate matter emissions are controlled by a cyclone in series with a wet scrubber identified as LA-69. Sulfur dioxide and VOC emissions are also controlled by LA-69. Emissions are then exhausted at Stack S/V #4.
- (i) One (1) GR dryer identified as LA-47. Particulate matter emissions are controlled by two cyclones in series with a wet scrubber identified as LA-69. Sulfur dioxide and VOC emissions are also controlled by LA-69. Emissions are then exhausted at Stack S/V #4.
- (j) One (1) starch jets foam trap identified as LA-75. Under the normal operating scenario, all emissions are reclaimed. Under an alternative scenario, emissions are vented through Stack S/V #48.
- (k) One (1) pellet cooler / pellet bucket elevator aspiration system identified as LA-49, with particulate emissions controlled by one (1) primary cyclone in series with one (1) secondary cyclone, then vented through Stack S/V #13.
- (l) One (1) pellet cooler identified as LA-63, with particulate emissions controlled by one (1) primary cyclone in series with one (1) secondary cyclone, then vented through Stack S/V #42.
- (m) One (1) feedhouse aspiration system identified as LA-71. Sulfur dioxide and VOC emissions are controlled by a wet scrubber identified as LA-71. Emissions are then exhausted at stack S/V #4.

### **History**

A. E. Staley Manufacturing Company submitted a Part 70 permit application for a corn processing plant on May 31, 1996. This application shall be incorporated in the submitted Part 70 application. This application is the first modification since that date.

The replacement of the secondary multicyclone controlling Riley coal-fired boiler LA-45 with a high-efficiency electrostatic precipitator occurred in 1999. Prior approval by OAM was not needed. It is being included in this application because A. E. Staley has requested the particulate emission limit be lowered on this facility.

### **Enforcement Issues**

There are no enforcement actions pending against this emission source.

## Stack Summary

The following stacks will be affected by this revision:

Stack ID	Operation	Height (feet)	Diameter (feet)	Temperature (°F)	Flow Rate (acfm)
4	Main Stack - Emissions Combined From: Feed Cooler (LA-17B) Riley Coal-Fired Boiler (LA-45) Fiber Dryer Scrubber (LA-67) Gluten Dryer Scrubber (LA-68) Germ & GR Dryers Scrubber (LA-69) Feedhouse Aspiration Scrubber (LA-71)	250	12	138	362,312
48	Jet Foam Trap (LA-75)	105	2	220	19,292
13	Pellet Cooler #1 (LA-49)	74	2.1	100	35,000
42	Pellet Cooler #2 (LA-63)	74	5.3	100	35,000
54	Pellet Hammermill Scrubber (LA-77)	74	1.25	100	5,000
55	Corn Steeping Tank (LA-62C)	105	2	125	750
56	Corn Steeping Tank (LA-62D)	105	2	125	750

## Recommendation

The staff recommends to the Commissioner that the revision be approved as a significant source modification. This recommendation is based on the following facts and conditions:

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 October 12, 1999.

## Emission Calculations

See Appendix A of this document for detailed emissions calculations. (11 pages)

## Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

Prior state operation permits limit source emissions as follows:

Pollutant	Potential To Emit (tons/year)
PM	1243.0
PM-10	1243.0
SO <sub>2</sub>	12560.0
VOC	545.0
CO	280.0
NO <sub>x</sub>	2460.0

HAP's	Potential To Emit (tons/year)
Individual HAP	>10.0
Total HAP	>25.0

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of criteria pollutants are equal to or greater than 100 tons per year. The potential to emit a single hazardous air pollutant (HAP) is equal to or greater than ten (10) tons per year and the potential to emit a combination of HAP is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

This existing source is a major source for Prevention of Significant Deterioration, 326 IAC 2-2. It is in one of the 28 source categories and pollutants have the potential to emit at a rate of 100 tons per year or more.

The revision's potential to emit is as follows:

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO <sub>2</sub> (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO <sub>x</sub> (ton/yr)
Proposed Modification	16.6	16.6	12.1	156.3	-	-
Contemporaneous Increases (1995)	75.8	74.9	1.8	0.2	2.7	9.2
Contemporaneous Decreases (1995)	-303.4	-273.3	-84.9	-162.8	-	-
Contemporaneous Decreases (1999)	-2.5	-2.5	-	-	-	-
Contemporaneous Decreases (2000)	-31.9	-31.9	-	-	-	-
Net	-245.4	-216.2	-71.0	-6.3	2.7	9.2
PSD Significant Levels	25	15	40	40	100	40

The VOC decreases from 1995 result from the 1995 debottlenecking project; the reductions were unquantifiable at that time. The PM / PM-10 decreases from 1999 result from replacement of the control device and the acceptance of a lower PM emission limit on boiler LA-45. The decreases in 2000 are those related to this project. See Appendix A of this document for detailed emissions calculations. (11 pages)

The potential to emit (as defined in 326 IAC 2-7-1(29)) volatile organic compounds (VOC) is greater than 25 tons per year, and the potential to emit sulfur dioxide is greater than 25 tons per year before limits. Therefore, the revision is classifiable as a significant source modification under 326 IAC 2-7-10.5.

This modification is not a major modification for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 because the net increase in potential to emit every attainment pollutant is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

### County Attainment Status

The source is located in Tippecanoe County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Tippecanoe County has been designated as attainment or unclassifiable for ozone.

Tippecanoe County has also been classified as attainment or unclassifiable for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

#### **Federal Rule Applicability**

This source is not subject to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.300 Subpart DD) "Standards of Performance for Grain Elevators" since grain storage capacity is less than 1,000,000 bushels.

The coal-fired boiler LA-45 is not subject to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.40b Subpart Db) "Standards of Performance for Steam Generating Units" since it was constructed prior to 1984. The replacement of the control device alone does not constitute a modification under 40 CFR 60.2.

There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

#### **State Rule Applicability - Entire Source**

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

This source is not subject to 326 IAC 2-4.1-1 (New Source Toxics Control). The source was existing as of July 27, 1997, this modification is not classified as a reconstruction under 40 CFR 63.41, and the HAP emissions from the new construction does not by itself have potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAPs. See Appendix A for detailed emissions calculations. (11 pages)

##### 326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of pollutants specified in the rule. Pursuant to this rule, the source must annually submit an emission statement for the source. The annual statement must contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

##### 326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

- (a) Opacity shall not exceed an average of forty percent (40%) 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.

**State Rule Applicability - Riley Coal-Fired Boiler (LA-45)**

326 IAC 6-2-3 (Emission Limitations for Sources of Indirect Heating)

This facility is subject to 326 IAC 6-2-3. Pursuant to 326 IAC 6-2 (Emission Limitations for Sources of Indirect Heating) particulate emissions shall be based on an equation that has been determined in a prior permit to default to 0.6 pounds per million BTU. The control equipment shall be in operation at all times this emission unit is in operation, in order to comply with this limit.

### 326 IAC 6-3-2 (Particulate Emissions Limitations)

Pursuant to 326 IAC 6-3-1 (Applicability), this emission unit is expressly exempt from 326 IAC 6-3-2.(Particulate Emissions Limitations). It is exempt because 326 IAC 6-2-3 is applicable.

### 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)

This facility is subject to 326 IAC 7-1.1-2. Pursuant to 7-1.1-2 (Sulfur Dioxide Emission Limitations) sulfur dioxide emissions shall be limited to 6.0 pounds per million BTU for coal combustion. Since this facility can operate without controls at times, the limit applies before the effect of controls. For coal with an average heat content of 11,000 BTU per pound, this limit equates to a maximum sulfur content of 3.47% to comply with the limit. See Appendix A for detailed calculations.

### 326 IAC 12 (New Source Performance Standards)

The coal-fired boiler LA-45 is not subject to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.40b Subpart Db) "Standards of Performance for Steam Generating Units" since it was constructed prior to 1984. The mere replacement of the control device does not constitute a modification under 40 CFR 60.2.

### Additional Limitations

Particulate matter tests were performed on this boiler in 1997, and emissions were 0.245 pounds per million BTU when using two multiclones as control devices. A.E. Staley has requested the emission limit be reduced from the present standard of 0.4 pounds per million BTU to 0.2 pounds per million BTU when using one multiclone and one electrostatic precipitator.

This change will effect an emission reduction of at least 2.5 tons per year. See Appendix A of this document for detailed emissions calculations. (11 pages)

### **State Rule Applicability - Two Pellet Coolers LA-49 and LA-63**

#### 326 IAC 6-3-2 (Particulate Emissions Limitations)

This emission unit is subject to 326 IAC 6-3-2. Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), particulate matter (PM) emissions shall be limited by the following equation for process weight rates greater than sixty thousand (60,000) pounds per hour:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

An emission calculation does not appear in Appendix A due to claims of confidentiality on process weight rates. However, OAM has determined that the control equipment shall be in operation at all times the facility is in operation in order to comply with this limit.

### **State Rule Applicability - Corn Steep Tanks LA-62C and LA-62D**

#### 326 IAC 8-1-6 (New Facilities: General Reduction Requirements)

The VOC potential emissions from this facility are less than 25 tons per year. Therefore, the best available control technology (BACT) requirement in 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) does not apply.

### **State Rule Applicability - Gluten Dryer LA-15 and Germ Dryer LA-60**

#### 326 IAC 8-1-6 (New Facilities: General Reduction Requirements)

The VOC potential emissions from LA-60 and LA-15 are each greater than 25 tons per year. Also, these facilities were constructed after January 1, 1980. Therefore, the BACT requirement in 326 IAC 8-1-6 applies.

The applicant has submitted a top-down BACT analysis with the application. A summary of the analysis appears below:

*Thermal oxidation involves incinerating VOC with residence times of 0.5 - 1.0 seconds at temperatures of 1200-1600EF. Destruction efficiencies of 99% are possible. Thermal oxidation was determined to be technologically feasible, but economically infeasible. Costs for thermal incineration were estimated at \$12,700 per ton VOC removed.*

*Catalytic oxidation involves incinerating VOC in the presence of a catalyst with residence times and temperatures less than thermal oxidation. Catalytic oxidation was determined to be technologically infeasible. The presence of sulfur dioxide in the exhaust stream would poison any catalyst.*

*Carbon adsorption involves collecting VOC on a carbon filter surface. Carbon adsorption was determined to be technologically infeasible. Gas streams must be of relatively low temperature and humidity and free of particulate matter, rendering it unsuitable for dryer exhaust emissions.*

*Absorption involves scrubbing VOC with a liquid by the process of diffusion. Absorption was determined to be technologically feasible. Removal efficiencies of 95% are possible for VOCs that are highly soluble in water, but are only 0 - 8% for VOCs that have low or no solubility. Overall removal efficiency is estimated at 45% for this process.*

*Vapor condensation involves cooling VOC in the exhaust stream to the point where vapors condense into liquid. Vapor condensation was determined to be technologically infeasible. It would require prohibitively large heat transfer areas to cool the gas stream due to the high air flow rates involved in this process.*

Pursuant to 326 IAC 8-1-6, emissions of volatile organic compounds from dryers LA-15 and LA-60 shall be controlled by wet scrubbers having 45% overall VOC removal efficiency.

Emission unit LA-60 is controlled by Scrubber LA-68. Emission unit LA-15 is controlled by Scrubber LA-69. Both scrubbers are mentioned below since they control other processes also.

### **State Rule Applicability - Fiber Dryer Scrubber LA-67**

Prior operation permits limit particulate matter emissions to 20.36 pounds per hour.

Prior operation permits limit sulfur dioxide concentrations to 187 parts per million.

### **State Rule Applicability - Gluten Dryer Scrubber LA-68**

Prior operation permits limit particulate matter emissions to 26.06 pounds per hour.

Prior operation permits limit sulfur dioxide concentrations to 187 parts per million.

### **State Rule Applicability - Germ/GR Dryers Scrubber LA-69**

Prior operation permits limit particulate matter emissions to 14.16 pounds per hour. A. E. Staley has requested this limit be raised to 14.7 pounds per hour. This request to relax an emission limit requires review as if construction had not commenced. OAM has determined that if the original construction permit (157-3581-00033) had allowed 14.7 pounds per hour, rule applicability would be unchanged.

Prior operation permits limit sulfur dioxide concentrations to 187 parts per million.

### **State Rule Applicability - Jet Foam Trap LA-75**

326 IAC 7-1.1-1 (Sulfur Dioxide Emissions Limitations)

Pursuant to 326 IAC 7-1.1-1, this emission unit is subject to 326 IAC 7-1.1-2. However, 326 IAC 7-1.1-2 does not place any restrictions on jet foam traps.

326 IAC 2-2 (Prevention of Significant Deterioration)

This facility will be limited to 360 hours per year usage under the alternate operating scenario. This limit will control the sulfur dioxide emissions increase to less than 40 tons per year. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements will not apply.

### **State Rule Applicability - Pellet Hammermill Scrubber LA-77**

326 IAC 6-3-2 (Particulate Emissions Limitations)

This emission unit is subject to 326 IAC 6-3-2. Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), particulate matter (PM) emissions shall be limited by the following equation for process weight rates greater than sixty thousand (60,000) pounds per hour:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

An emission calculation does not appear in Appendix A due to claims of confidentiality on process weight rates. However, OAM has determined that the control equipment shall be in operation at all times the facility is in operation in order to comply with this limit.

### **Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as hazardous air pollutants on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

The new construction will emit levels of hazardous air pollutants less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments. See attached calculations for detailed hazardous air pollutant calculations. (11 pages)

### **Conclusion**

The modification of these emission units shall be subject to the conditions of the attached significant source modification, No 157-11449-00033.

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

**Addendum to the  
Technical Support Document for New Construction and Operation**

<b>Source Name:</b>	A. E. Staley Manufacturing Company
<b>Source Location:</b>	3300 U.S. 52 South, Lafayette, IN 47905
<b>County:</b>	Tippecanoe
<b>SIC Code:</b>	2046
<b>Operation Permit No.:</b>	157-6008-00033
<b>Revision No.:</b>	157-11449-00033
<b>Permit Reviewer:</b>	Allen R. Davidson

On March 7, 2000, the Office of Air Management (OAM) had a notice published in the Lafayette Journal and Courier stating that A. E. Staley Manufacturing Company (Staley) had applied for a significant source modification to a Part 70 permit, for changes in the method of operation that will allow the increase of corn wet milling at the plant. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed. Twenty-three written comments were received.

On February 25, 2000, OAM had a notice published in the Lafayette Journal and Courier that a public hearing would be held on the proposed permit at 7:00 p.m on Wednesday, March 29, 2000 in the Tippecanoe Room at the County Commissioner's Office, Lafayette, Indiana. About 100 people attended the hearing, and 26 people made comments at the hearing.

The summary of the comments and corresponding responses appear below. Since many of the comments are similar in nature they have been grouped together for one response.

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**Comment:**

The notice we received stated this a Part 70 permit "significant source modification." What's the meaning of these three words?

**Response:**

A Part 70 permit is a federal permit that large emission sources must obtain. This permit is required of any emission source that emits more than 100 tons per year of any criteria pollutant: particulate matter less than 10 microns in size (PM-10), volatile organic compounds (VOC), carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), or sulfur dioxide (SO<sub>2</sub>). This permit is also required of any emission source that emits more than 10 tons per year of any hazardous air pollutant (HAP) or 25 tons per year of any combination of hazardous air pollutants. IDEM is scheduled to make a decision regarding A. E. Staley's pending application for a source-wide Part 70 permit before July 1, 2001.

This application is called a "modification" because the South Plant already exists but is being changed. The term "source modification" refers to the addition of emission units at an existing emission source. (It differs from the term "permit modification" which refers to a change in permit conditions without any new emission units being added.)

The term "significant" refers to when emissions of any criteria pollutant could increase more than 25 tons per year without federally enforceable controls and limits. The presence of such controls and limits does not change the classification as a significant source modification.

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**Comment:**

I wanted to compare with what I read in the paper about an article about reduced emissions. I couldn't quite figure those numbers, because the paper gave me different numbers than the South Plant manager reported as a reduction.

**Response:**

The newspaper article and the plant manager are probably stating emission levels differently. There are three common methods of describing emission levels by OAM:

"Actual emissions" refers to the amount of emission that is actually released, based on actual production and operating conditions.

"Potential emissions" refers to emissions assuming 8760 hours of operation per year at maximum capacity without controls. These numbers are useful for determining rule applicability, but are often a poor indicator of actual emissions.

"Potential to emit" refers to emissions with operation as close to 8760 hours of operation per year at maximum capacity as possible after federally enforceable controls and limits are imposed.

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**Comment:**

A lot of folks don't really realize what is coming out of stacks at Staley South. I must impress that 1998 is the last records that are on the books at IDEM:

Carbon monoxide:	205 tons per year
Nitrous oxide:	1,439 tons per year.
PM-10:	714 tons per year.
Sulfur dioxide:	9,908 tons per year.
Volatile organic compounds:	920 tons per year.

**Response:**

The actual emissions reported for the South Plant in 1998 are as follows:

Carbon monoxide:	255 tons per year
Nitrous oxide:	433 tons per year.
PM-10:	393 tons per year.
Sulfur dioxide:	3,230 tons per year.
Volatile organic compounds:	833 tons per year.

The annual emissions statement for 1999 is required to be submitted by A. E. Staley on July 1, 2000. The requirement to submit an annual emissions statement appears in Condition C.18.

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**Comment:**

I don't know if you people are familiar with SO<sub>2</sub>, but it can eat a stainless steel tank out, and that stuff's going out in the atmosphere.

**Comment:**

As a science teacher, I know very well what sulfur dioxide will do to the atmosphere, not only here in Lafayette, but hundreds of miles away, in the form of acid rain.

**Response:**

OAM is aware of the characteristics of sulfur dioxide. It is a contributor to acid rain. Its emission is regulated under state and federal laws. OAM has the authority to enforce both state and federal laws regarding sulfur dioxide emissions. The U.S. EPA sets National Ambient Air Quality Standards (NAAQS), which are standards used to determine the extent of air pollution in any geographic region. The standard for sulfur dioxide is 80 micrograms per cubic meter, or 0.030 parts per million (ppm), based on an annual arithmetic mean. The highest arithmetic mean from any sulfur dioxide monitor in or near Lafayette came from a monitor in Fountain County located halfway between Lafayette and Terre Haute, IN. That monitor registered an arithmetic mean of 0.009 ppm in 1997, 0.005 ppm in 1998, and 0.007 ppm in 1999. Air quality in Lafayette meets NAAQS for sulfur dioxide.

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**Comment:**

Page 2 of the public file copy of the application states: "Previously unpermitted VOC emissions resulting from steeping, milling and feed processing operations were discovered during Title V investigations." What kind of unpermitted operations were these?

**Response:**

The Fiber Dryer Scrubber (LA-67), Gluten Dryers Scrubber (LA-68), and the Germ/GR Scrubber (LA-69) had been previously permitted for PM, SO<sub>2</sub> and combustion emissions. The Millhouse Aspiration Scrubber (LA-70) and the Feedhouse Aspiration Scrubber (LA-71) had been permitted for sulfur dioxide emissions. Process VOC emissions from these facilities were discovered during testing in 1996.

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**Comment:**

Page 2 of the public file copy of the application states: "The emissions rates from these sources are not widely documented in the corn wet milling industry." Why not? Would you say that reliable emission factors have not been published?

**Response:**

According to U.S. EPA Document AP-42, there were only 27 corn wet milling plants operating in the United States in 1994. AP-42 also states: "The diversity of operations in corn wet milling results in numerous and varied potential sources of air pollution. It has been reported that the number of process emission points at a typical plant is well over 100."

With such a small number of emission sources in this industry and large diversity between them, only generalizations about emissions are made in AP-42. The document supplies particulate matter emission factors with a rating of "E", which is the lowest level of quality (only the highest test data used to develop the factor), and no emission factors are provided for VOC and sulfur dioxide. In the absence of data, OAM will require testing to determine compliance with state and federal regulations.

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**Comment:**

Any time they have a grind increase, they're putting more chemicals in these products. So you're going to have chemical emissions. Whether it's at the dry end or the wet end, or if they put product on the ground, or if there are chemical overflows and it goes to the sewer, the fumes and the odors are going to our neighborhoods.

**Response:**

OAM recognizes that VOC and HAP emissions may occur in various stages of the manufacturing process after the process that the VOC or HAP was utilized. This is the reason for process VOC emissions being present for LA-67 through LA-71. This problem is common to other emission sources also, such as sources with surface coating operations.

For purposes of regulatory review, OAM assumes that all VOC and HAP used are emitted, excluding what is quantified as retained in the product or collected as waste. Credit for emission control is applied only to the emissions sent to the control device. Performance tests must measure emissions at the inlet as well as the outlet of the control device. The difference between the amount of VOC used and the amount reaching the inlet of the control device is considered to be fugitive and uncontrolled, unless tests of other processes show where the emission occurs and demonstrate control efficiency at that location.

The 1999 VOC emissions testing of LA-67 through LA-69 sought to obtain that information. The tests showed 220 pounds per hour VOC and HAP emissions at the inlet of the control devices, and 100 pounds per hour at the outlet of the control devices, for an efficiency of 54%. However, A. E. Staley is only claiming 45% control, and OAM is using 45% control in emission calculations. (See Appendix A of the Technical Support Document for more details about the tests results.)

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**Comment:**

They keep on saying that their SO<sub>2</sub> rates are going down, and that could be very well true, because they went from coal to gas, which is going to downgrade what they're doing.

**Response:**

A. E. Staley has undergone heat recovery projects which reduce the amount of heat input necessary to provide steam to the plant by approximately 25%. Using existing multiple fuel boilers, the plant could supply much if not all of its heat input requirements from the combustion of fuels other than coal. However, the company has indicated that it does not want coal combustion to be limited. No emission credit will be given to A. E. Staley for switching fuels, since that action will not be federally enforceable.

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**Comment:**

When an inspector comes by and monitors the air, Staley could change the product and go straight starch or feed or whatever, and not have the chemicals in the product.

**Response:**

For purposes of permit review, a production line that produces different products will have rule applicability based on the worst case product. The permit would also require production of the worst case product during any required testing. By determining compliance with the worst case product, producing the better case products should comply inherently.

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**Comment:**

I know that they can change the speed on the dryers at any time. Even if it's an independent agency, that independent agent doesn't know how fast that dryer's supposed to be going at the time, if they're out in the field. So, we need to be concerned with that.

**Comment:**

We know that these plants operate on 24-hour schedules, constantly increasing production. Maximum capacities of these facilities are considered confidential information by Staley. We don't know what that maximum capacity is.

**Response:**

In order to ensure that visiting inspectors have availability to the maximum capacities of the facilities, the permit has been amended to read as follows:

**D.3.3 Record Keeping Requirements**

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~~There are no specific record keeping requirements for this facility.~~

**The maximum storage capacity of LA-62-C and LA-62D, which have been claimed as confidential information, shall be kept at the emission source for the life of the facility and made available to visiting inspectors upon request.**

**D.4.5 Record Keeping Requirements**

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- (a) To document compliance, the Permittee shall maintain a log of operation and preventive maintenance logs (including work purchases orders), and those additional inspections prescribed by the Preventative Maintenance Plan.
- (b) **The maximum production capacity of LA-63, which has been claimed as confidential information, shall be kept at the emission source for the life of the facility and made available to visiting inspectors upon request.**
- (c) All records **other than maximum production capacity** shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**D.6.8 Record Keeping Requirements**

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- (a) To document compliance, the Permittee shall maintain a log of hourly recorded pH values and preventive maintenance logs (including work purchases orders), and those additional inspections prescribed by the Preventative Maintenance Plan.
- (b) Records of the scrubbant flow rate shall be taken hourly and the average checked at least once per shift.
- (c) **The maximum production capacity of LA-8, LA-17-A, LA 15, LA-60, and LA-47, which have been claimed as confidential information, shall be kept at the emission source for the life of the facility and made available to visiting inspectors upon request.**
- (d) All records **other than maximum production capacity** shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**D.7.5 Record Keeping Requirements**

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- (a) Records of the scrubbant flow rate shall be taken hourly and the average checked at least once per shift.
- (b) **The maximum production capacity of LA-17B, which has been claimed as confidential information, shall be kept at the emission source for the life of the facility and made available to visiting inspectors upon request.**

- (c) All records **other than maximum production capacity** shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

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**Comment:**

Not all of the pollution is monitored, because they only have to report a release over a certain amount. There are daily amounts that are released out into the air, and they don't have to report that.

**Response:**

Emission monitors are not required by regulation on all facilities. However, the source's emissions must be reported annually, and the annual emission statement must account for all emission units whether monitors are required or not. When emission monitors are not used, the accounting must be done using test data, equipment manufacturer's guarantees, or emission factors accepted by the U.S. EPA.

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**Comment:**

Fermentation may occur and ethanol may be released to the atmosphere, and acetaldehyde may also be formed and released. How can you possibly estimate how much is released?

**Comment:**

In an article in the Journal and Courier, IDEM and plant manager of Staley South did not have enough information to calculate how much acetaldehyde Staley expects to create; is that right?

**Comment:**

IDEM should propose that they not be allowed to proceed any further with the expansion until they state openly the chemical content of what they're emitting, what its calculated or known health consequences are, and that they and the state guarantee that in a certain time frame, these emissions, if in fact they are dangerous, that at a certain time frame they be reduced to a level which is no longer dangerous to our community.

**Response:**

Because the regulations do not specifically address acetaldehyde, it was not necessary to calculate acetaldehyde emissions in great detail. The regulations address a group of hazardous air pollutants, of which acetaldehyde is one of 188 possible.

A. E. Staley contracted Airtech Environmental Services Inc. to test the three dryer scrubbers on February 2-4, 1999. The test results provided the following emission data:

Pollutant:	Fiber Dryer (lb/hr)	Gluten Dryer (lb/hr)	Germ/GR Dryers (lb/hr)	Total (lb/hr)
acetaldehyde	1.950	ND	3.640	5.590
methanol	1.660	ND	1.500	3.160
ethanol	38.000	22.800	16.100	76.900
propionaldehyde	1.220	0.475	0.881	2.576
2-propanol	ND	ND	0.245	0.245
isobutyraldehyde	0.183	0.276	0.215	0.674
n-propanol	0.239	0.244	0.100	0.583

butyraldehyde	0.080	0.170	ND	0.250
2-butanol	0.308	0.445	0.016	0.768
ethyl acetate	0.245	0.115	ND	0.360
n-butanol	0.620	0.314	0.116	1.050
ethylene glycol	ND	ND	ND	0.000
2-methyl-butadol	ND	ND	ND	0.000
2,3-butanediol	ND	ND	ND	0.000
butyl acetate	ND	ND	ND	0.000
furfurol	1.250	ND	0.695	1.945
hydrogen sulfide	ND	ND	0.634	0.634
methyl mercaptan	ND	ND	0.302	0.302
dimethyl sulfide	ND	ND	ND	0.000
dimethyl disulfide	ND	ND	ND	0.000
formaldehyde	0.482	0.097	0.684	1.263
acetic acid	3.160	ND	0.365	3.525
lactic acid	0.385	ND	ND	0.385
formic acid	ND	ND	ND	0.000
Total VOC				99.576

ND = emissions were not present or were at non-detectable levels.

Hydrogen sulfide, while considered as HAP, is not a VOC emission and is excluded from the total VOC.

The health risks of four of these pollutants - acetaldehyde, formaldehyde, methanol and ethylene glycol - are discussed in detail later in this addendum. The health risks of other pollutants are available by searching on the pollutant's name at the U.S. EPA Web site: <http://www.epa.gov>.

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**Comment:**

Why is no permit modification necessary for the mill house scrubber with processing rates increased?

**Response:**

Some process emissions originally controlled by the mill house scrubber (LA-70) will be diverted to the new hammermill scrubber (LA-77). Previously, the emissions from the hammermill were controlled by LA-70. With LA-77 in place, there will be two scrubbers where there was only one. The requirements of LA-77 are listed in this modification in Section D.5. The requirements of LA-70 are not listed in this modification, but will be listed in the pending Part 70 permit.

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**Comment:**

In 1990, the Environmental Defense Fund (EDF) ranked Tippecanoe County among the worst 20 percent of all counties in the United States in terms of an average individual's added cancer risk from hazardous air pollutants.

**Response:**

The Environmental Defense Fund, a not-for-profit organization, hosts the web site <http://www.scorecard.org>, where the statistics that were mentioned can be found based on ZIP code. In addition to Tippecanoe County ZIP code 47905, the ZIP codes of five other Indiana counties were selected at random to make a comparative evaluation. The web site provided similar statistics for all five counties as for Tippecanoe County.

In terms of air quality measurements, Tippecanoe County has been classified as meeting all federal and state health-based air quality standards.

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**Comment:**

EDF lists acetaldehyde as a top-ranked recognized carcinogen, and suspect it to be a developmental toxicant which would affect unborn children, a suspected kidney toxicant, and a suspected neurotoxicant, respiratory, skin, and sensor intoxicant.

**Comment:**

I want to speak briefly to my concerns about emissions of hazardous chemicals, and one section of the permit application requires the company to name compounds which will be emitted into the air from the equipment covered under the permit for expanded production. It stated that these chemicals are not raw materials in the production process, but they are generated byproducts of unintentional biological fermentation. The four chemicals that are mentioned in this application are acetaldehyde, methanol, formaldehyde and ethylene glycol, and these are all associated with recognized and suspected health risks.

**Comment:**

Formaldehyde is a recognized carcinogen, suspected as a gastrointestinal and liver toxicant, a neurotoxicant, a reproductive toxicant, and a respiratory toxicant. Ethylene glycol and methanol are suspected, in many of these same areas, health hazards to us.

**Comment:**

My father and his wife are living right next door. Do I need to be concerned about their health? I think it sounds like I should be.

**Response:**

The U.S. EPA has classified acetaldehyde as Group B2, a probable human carcinogen of low carcinogenic hazard. When directly injected into rats, acetaldehyde has caused cancer tumors. Concentrations in air emissions are far more dilute. The Reference Concentration (RfC) for acetaldehyde is 0.009 milligrams per cubic meter. The U.S. Environmental Protection Agency (EPA) estimates that inhalation of this concentration or less, over a lifetime, would not likely result in the occurrence of chronic health problems. The highest annual average concentration of acetaldehyde in the modeling analysis of Stack #4 was 0.0142 micrograms per cubic meter (0.0000142 milligrams per cubic meter).

The U.S. EPA has classified formaldehyde as Group B1, a probable human carcinogen of medium carcinogenic hazard. EPA has not established a RfC for formaldehyde. However, EPA estimates that if an individual were to breathe air containing formaldehyde at 0.08 micrograms per cubic meter over his or her entire lifetime, that person would theoretically have no more than a one-in-a-million increased chance of developing cancer as a direct result of breathing air containing the chemical. The highest annual average concentration of formaldehyde in the modeling analysis of Stack #4 was 0.0032 micrograms per cubic meter.

Methanol and ethylene glycol are not carcinogenic. They become toxic when they overload the human body's ability to remove them. For these two pollutants, this level of toxicity would require ingestion in liquid form.

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**Comment:**

I was wondering if the boiler that was installed in 1977 was grandfathered, and how much of the present equipment at the South Plant is grandfathered, and if the grandfathered equipment is not monitored and so may produce over and above emissions restrictions.

**Response:**

The term "grandfathering" refers to a regulation that does not apply to equipment that was installed before a certain date. The language that exempts the older facilities is called a "grandfather clause" and facilities that have grandfather clause status are referred to as "grandfathered." Grandfather clauses often appear in regulations to avoid the expense incurred from being applied retroactively to equipment that was installed before the regulation existed.

The Riley coal-fired boiler (LA-45) boiler is grandfathered from New Source Performance Standards. At the time it was built, the standards applied to boilers that were larger than 250 million British Thermal Units per hour. LA-45 is a unit of 239 million BTU per hour, which was under the threshold. The threshold was lowered to 100 million BTU per hour in 1984, but the lowering of the threshold did not cause NSPS to apply retroactively to LA-45.

Grandfather clause status is not absolute. When a facility has this status under one regulation, there are often other regulations which apply instead. For instance, 326 IAC 3-5 requires a continuous opacity monitor on boiler LA-45 regardless of its grandfather clause status from a similar requirement under NSPS. There is no grandfather clause that grants complete exemption to all regulations.

---

**Comment:**

Are total emissions of volatile organic compounds and particulate matter recorded, or is grandfathered equipment exempt from the totals?

**Response:**

The emissions from facilities are always counted toward annual emission reporting totals under 326 IAC 2-6, without regard to grandfather clause status .

---

**Comment:**

Is the grandfathered equipment more likely to cause incidents, malfunctions and shutdowns when all control devices are inoperable?

**Response:**

Grandfather clause status does not make allowances for operating improperly. The permit has conditions that require the control devices to be in operation at all times when the emission unit that it controls is in operation. It is the responsibility of the source to provide all maintenance necessary to comply with the permit conditions, without regard to an emission unit's age.

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**Comment:**

Does IDEM generally look at overall ambient air quality when they make a permit decision, taking into account other sources?

**Comment:**

You have fumes from a lot of factories here in this town, and how do you know they're not getting intermixed and where they're for sure coming from?

**Response:**

If it is a federal PSD permit, an ambient air quality analysis is required. This requires monitoring the local air to determine the pollution which may exist, then adding the emissions from the PSD permit in a computerized emission model, in order to demonstrate that the National Ambient Air Quality Standards (NAAQS) will not be exceeded if the PSD permit is approved.

Air quality modeling is not generally done with smaller-level permits. OAM will model air quality when requested at a public hearing. Such a model was requested at the hearing, and the results of the model are discussed in other comments in this addendum.

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**Comment:**

I would like to know, on the permitting application, is there a question like: "What is the closest residence or residences?" If there is, what effect does it have on your decision to permit or not permit?

**Response:**

Form GSD-02 "Plant Layout and GEP [good engineering practice] Stack Height Information" Question 1G asks for the distance to the nearest residence. The information on GSD-02, which includes a request for a plant layout map, is used for computerized emission modeling. There are no federal or state air regulations that require a minimum distance from a stack or building to the nearest residence. Form GSD-02 does not appear in the public copy of the application due to confidentiality claims: the blueprints of the A. E. Staley South Plant have a claim of confidentiality.

Form GSD-02 is known as Form B on older construction permit application forms.

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**Comment:**

Regarding the new open steeping tanks that are described in the application to be 105 feet above ground level and have the potential emissions of six ton per year of sulfur dioxide and 4.2 tons per year of volatile organic compounds: I'd like to know where they are going to be located on the property? How close to the residents, and can they be built somewhere else?

**Response:**

The new steep tanks have vents that are 105 feet above ground level. The tanks are not necessarily elevated to that level. The exact blueprints of the A. E. Staley South Plant have a claim of confidentiality and do not appear in the public copy of the application. However, OAM will make the generalization in the modeling calculations that all emission points in this source modification are a minimum distance of 750 feet from any property line.

OAM usually cannot dictate to an emission source where a facility will be located within the property lines. An exception is that OAM can deny a location if the modeling reveals a conflict with National Ambient Air Quality Standards and the conflict cannot be resolved otherwise. There was no conflict in the case of this application.

---

**Comment:**

How far would you say vapors from the 250-foot stack carry emissions before it falls on people and things? Any idea on that?

**Response:**

The modeling analysis of Stack #4 showed the highest one-hour and three-hour ground-level concentration occurred at a distance of 100 meters (328 feet) from the stack. The analysis showed the highest eight-hour ground-level concentration at a distance of 880 meters (2886 feet) from the stack. The annual average concentrations occur at a distance of 2134 meters (7000 feet) from the stack.

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**Comment:**

Less dangerous emissions and the reductions that we have seen through good-faith efforts are good. They are appreciated. But the smell itself impacts property values. There's no denying that.

**Comment:**

It seems to me this company has a contempt for our property values.

**Comment:**

The town has kind of moved out around Staley. I remember when I was in high school, there were a few homes, but nothing like there is now. So, I think Staley should be given the right to increase.

**Response:**

OAM does not take into account property values and city planning when making decisions. It is not within our authority since those do not affect emission levels.

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**Comment:**

There are many jobs that are going to be affected by this. There are a lot of farmers that rely on Staley's for income.

**Comment:**

A higher grind means Staley needs to buy more corn, which gives the farmers more money to spend in the local community, thus increasing the local economy.

**Comment:**

Staley stands to make more money and enhance profits from our community, and I think this is a unique window of opportunity to insist on a results-based commitment to improve rather than just good-faith efforts.

**Response:**

OAM does not take into account the economic benefits, to either the community or to the permit applicant, when making decisions.

**Comment:**

I'm President of Lafayette City Council. In the past, we have been very supportive and worked with Staley as they addressed the problem of their odor and their emissions, and Staley has made some great efforts. But now it's time for them to step up to the plate again and provide us with a plan. If this permit is granted, we want to see a plan that they will not increase their smell and not increase their emissions.

**Comment:**

The company reports on its efforts to address citizens concerns regarding odors and noise and air and water pollution and particulate matter fallout, and these efforts have gone on for several years but have not yielded positive results, so increased production should not be allowed until these production-related issues are resolved.

**Comment:**

People seem to be talking about Staley either going to expand or going to be environmentally responsible, and I think that it is possible to have both of these items happen. Unfortunately, it requires local, state and federal government requirements to make companies do this kind of stuff.

**Comment:**

If Staley falls in those broad guidelines of state and federal law, you have no choice but to grant the approval. Did I understand that right?

**Comment:**

If the state or federal guidelines don't capture the problem or remedy it, then what we might do in alternatives is to seek local regulation or legislation or ordinance to deal with the problem. Do I remember that right?

**Response:**

OAM does not have the authority to impose a moratorium on increased emissions, or to deny a permit based on noise or odors. However, communities may adopt and implement local standards that are more stringent than state and federal law. There is the possibility that local ordinances can be created relating to either noise or odor. It is also a valid option for a community to create a local environmental agency. The cities of Gary, Hammond, Indianapolis, Evansville, Terre Haute and Anderson have active local agencies.

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**Comment:**

Dust from trucks and railroad unloading hoppers are aspirated to existing corn unloading dust collectors. Does this prevent the dust from entering the atmosphere as the trucks and rail cars are unloaded, and what is the estimate of dust that escapes into the atmosphere when they're running whatever they're grinding?

**Response:**

The extra corn will be received via truck or rail. All truck roads are paved in the plant. As a result, fugitive emissions from road dust is classifiable as an insignificant activity under 326 IAC 2-7-1(21).

The rail cars and most of the trucks have a hopper bottom design that allows no fugitive emissions during unloading. About 5% of the corn is received by dump trucks. The unloading of dump trucks requires the corn receiving building's entry bay doors to be closed in order to control fugitive dust.

Condition A.3 is amended to read as follows:

**A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]**

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This source modification ~~does not involve~~ **also includes the following** insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Paved roads and parking lots with public access.**
- 

**Comment:**

What's the difference between light and heavy steep water?

**Response:**

Light steepwater has a very low concentration of solids, while heavy steepwater has been evaporated to approximately 50% solids.

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**Comment:**

As a representative of IDEM, there are both state and federal guidelines that you follow. Are they one and the same, basically?

**Response:**

Some of the state regulations are taken verbatim from the federal regulations, or are adaptations of federal law. Others are incorporated by reference, which allows the state law to change whenever the federal law changes. There are also state regulations which were written independently of federal law.

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**Comment:**

The air pollution control device on the feedhouse aspiration, LA-71, is 86% efficient for sulfur dioxide. Is that a good figure?

**Response:**

The control efficiency is sufficient for complying with state and federal regulations for sulfur dioxide. There are no requirements to use BACT for sulfur dioxide in the case of LA-71.

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**Comment:**

The air pollution control device on the feedhouse aspiration, LA-71, is 25% efficient for volatile organic compounds.

**Response:**

The control device is designed primarily to reduce emissions of sulfur dioxide, which is A. E. Staley's greatest pollutant. This control device does have inherent ability to control particulate matter and volatile organic compounds that are acids: formic acid, acetic acid and lactic acid. Because other forms of VOC are not affected, the sulfur dioxide scrubber is 54% effective against volatile organic compound emissions overall, based on the emissions test data of February 2-4, 1999. (See TSD Appendix A for detailed calculations.) A. E. Staley originally stated 25% control in the application as a conservative estimate, but later requested that control efficiency be raised to 45%.

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**Comment:**

The particulate matter control device LA-60 is rated at 90% efficiency for particulate matter. What would the rating be after a production increase?

**Response:**

Control efficiency is not dependent upon production levels. LA-60 will remain at 90% efficiency for particulate matter if the production increase is approved.

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**Comment:**

There would be no way to know what the control devices would do with PM-10, the particulate we can't measure.

**Response:**

PM-10 is a subclassification of PM. PM-10 is difficult to measure when there is moisture in the exhaust gas stream, but PM can be measured. In the event that PM-10 is not tested or not known, 100 percent of PM is considered to be PM-10. Unlike dry particulate control devices, where smaller particulate can possibly penetrate a filter's fabric easier than larger particulate, a wet scrubber's control efficiency rating for PM can be assumed to be the same for PM-10.

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**Comment:**

Is IDEM requiring the best available technology in this permit?

**Response:**

For two of the emission units, LA-15 and LA-60, best available control technology is required for VOC under 326 IAC 8-1-6. The two control devices determined to be BACT are LA-68 and LA-69. Because LA-8, LA-17A and LA-47 are controlled by the same technology, they benefit from BACT although it is not required for those emission units.

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**Comment:**

You have the authority to protect our reasonable enjoyment of property under statute IC 13-14-8-4 Section 4, where it adopts rules and standards of economic reasonableness of measuring or reducing any type of pollution. Why do you selectively exclude noise pollution and odor pollution? Doesn't it say in the statute about reducing any type of pollution?

**Response:**

Statute IC 13-14-8-4 reads as follows:

Sec. 4. In adopting rules and establishing standards, a board shall take into account the following:

- (1) All existing physical conditions and the character of the area affected.
- (2) Past, present, and probable future uses of the area, including the character of the uses of surrounding areas.
- (3) Zoning classifications.
- (4) The nature of the existing air quality or existing water quality, as appropriate.
- (5) Technical feasibility, including the quality conditions that could reasonably be achieved through coordinated control of all factors affecting the quality.
- (6) Economic reasonableness of measuring or reducing any particular type of pollution.
- (7) The right of all persons to an environment sufficiently uncontaminated as not to be injurious to:
  - (A) human, plant, animal, or aquatic life; or
  - (B) the reasonable enjoyment of life and property.

The statute grants the Air Pollution Control Board authority to consider the effect of contamination on the environment, but unless the Air Pollution Control Board adopts a rule or establishes a standard by one means or another, IDEM does not have regulatory authority.

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**Comment:**

IDEM is not regulating odors; is that correct?

**Comment:**

Granting permits for increased emissions without a concrete commitment from A. E. Staley to eliminate the stink that hangs over the northeast corridor of our county seems exactly the wrong way to go at this time.

**Comment:**

A. E. Staley Manufacturing Company is known throughout our all-American community for the noxious odors caused by its production processes and the associated waste generation. The odors are only a warning sign of all these unknown and unseen and potentially hazardous emissions also contained in that same air that stinks.

**Comment:**

We're not here to stop A. E. Staley from going forward, but we think they should stop and fix this problem they have right now with odors before they go forward to increase their production.

**Comment:**

I know they spent a lot of money trying to control the odors, and I know that they will continue to do that in the future.

**Response:**

IDEM has no specific federal or state authority to regulate odors. However, there is some legal authority to regulate the odor control devices on A. E. Staley's wastewater treatment plant due to an agreed order signed by Staley and IDEM in 1996. Staley was assessed a civil penalty of \$161,500 but the agreed order provided that the penalty could be abated in exchange for undertaking a \$1.5 million odor control project that would not otherwise be required by federal or state law at the South Plant's wastewater treatment plant. Staley elected to undertake the project. The agreed order provides conditions for operating and monitoring those controls and complying with the agreed order.

The wastewater treatment plant is outside the scope of this source modification, so it does not appear in this source modification permit. IDEM is aware of the presence of odors which emanate from outside of the wastewater treatment plant, and will pursue remedies to the extent that the regulations allow. At present, OAM can only regulate the pollutants affected by the modification which may be contributing to the odors.

---

**Comment:**

The smell itself indicates that there is particulate matter, and these irritants likely cause respiratory distress in asthmatics and others.

**Response:**

OAM is aware of the characteristics of particulate matter. Its emission is regulated under state and federal laws. However, odors can derive from pollutants other than particulate matter. For example, aromatic hydrocarbons are a source of odor which are regulated generically as volatile organic compounds (VOC). Also, hydrogen sulfide is a source of odor which is not considered particulate matter or VOC and is regulated uniquely.

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**Comment:**

Has the Staley South Plant been in compliance with air emission laws and regulations over the past five years?

**Comment:**

Most of what we're experiencing here in town is within the realm of what is legal?

**Response:**

OAM inspects the A. E. Staley's plants per U.S. EPA guidelines and whenever there are complaints made to OAM. All inspections are unannounced. There have not been any violations at the A. E. Staley South Plant in five years. The 1996 agreed order involved opacity and particulate matter exceedances at the South Plant, and monitoring violations at the Sagamore Plant, prior to 1995.

---

**Comment:**

Does IDEM think that it's reasonable for people to be unable to open their windows or have a picnic in their yard?

**Response:**

IDEM can only act upon existing laws and regulations that grant it the authority to regulate. However, laws and regulations can be changed. The Indiana Air Pollution Control Board can be petitioned for a rule change with as little as 200 signatures. (Procedures are listed further in this addendum.) In addition, letters requesting a law change can be written to the Governor or to local state legislators, c/o State House, North Capitol Avenue, Indianapolis, IN 46204. Communities may also adopt and implement local standards that are more stringent than state and federal law.

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**Comment:**

Are you familiar with the provision for citizens to petition for rule development? Do you know what the process is to get stronger regulations in place to regulate odor?

**Response:**

The Indiana Air Pollution Control Board generally meets on the first Wednesday of every month. A calendar of meeting dates is available on the Internet at <http://www.state.in.us/idem/oam/>.

Any person may present written proposals for the adoption, amendment, or repeal of a rule by the board. A proposal presented under this section must be supported by a statement of reasons; and accompanied by a petition signed by at least two hundred (200) persons. If the board finds that the proposal is not plainly devoid of merit and does not deal with a subject on which a hearing was held within the previous six (6) months; the board shall give notice and hold a hearing on the proposal.

The board may not adopt a rule until the board has conducted at least two (2) public comment periods, each of which must be at least thirty (30) days in length. If a rule has undergone substantial changes after the second hearing, the board must conduct a third public comment period that is at least twenty-one (21) days in length. IDEM must provide notice in the Indiana Register of all public comment periods, including the full text of the proposed rule and any amendments arising from comments.

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**Appendix A: Emissions Calculations**

**Company Name:** A.E.Staley Manufacturing Co.  
**Address City IN Zip:** Lafayette, IN  
**CP:** 157-00033  
**Plt ID:** 157-11449  
**Reviewer:** Allen R. Davidson  
**Date:** 11/17/99

		Particulate Matter/ PM-10			
		AFTER	BEFORE	CHANGE	
LA-62C	Outdoor Steep Tank	0 lb/hr -	0 lb/hr =	0 lb/hr	
LA-62D	Outdoor Steep Tank	0 lb/hr -	0 lb/hr =	0 lb/hr	
LA-77	Feedhouse Aspiration Scrubber	0 lb/hr -	0 lb/hr =	0 lb/hr	
LA-67	Fiber Dryer Scrubber	20.36 lb/hr -	20.36 lb/hr =	0 lb/hr	
LA-68	Gluten Dryer Scrubber	26.06 lb/hr -	26.06 lb/hr =	0 lb/hr	
LA-69	Germ/DR Scrubber	14.2 lb/hr -	14.2 lb/hr =	0 lb/hr	
LA-17B	Feed Cooler	4.5 lb/hr -	6.4 lb/hr =	-1.9 lb/hr	-8.32 ton/yr
LA-49	Pellet Cooler #1	5.4 lb/hr -	3.5 lb/hr =	1.9 lb/hr	8.32 ton/yr
LA-43	Pellet Cooler #2	5.4 lb/hr -	3.5 lb/hr =	1.9 lb/hr	8.32 ton/yr
LA-75	Jet Foam Trap	0 lb/hr -	0 lb/hr =	0 lb/hr	
LA-77	Hammermill Scrubber	0.64 lb/hr -	6.0157 lb/hr =	-5.3757 lb/hr	-23.55 ton/yr

The following calculations determine reduction in particulate emissions from LA-45:

LA-45	AFTER	239 MMBtu/hr *	0.02 lb/MMBtu =	4.78 lb/hr
	BEFORE	239 MMBtu/hr *	0.0235 lb/MMBtu =	5.6165 lb/hr
	CHANGE			-0.8365 lb/hr

  

$\frac{64100 \text{ ton coal}}{\text{year}}$	$\frac{11000 \text{ Btu}}{\text{lb}}$	$\frac{2000 \text{ lb}}{\text{ton}}$	$\frac{\text{year}}{8760 \text{ hour}}$	160.98 * million Btu/hr (avg)
$\frac{160.982 \text{ *million Btu/hr(avg) }^*}{239 \text{ *million Btu/hr (max)}} \times 8760 \text{ hr/yr(max)} = 5900.4 \text{ hr/yr(equiv)}$				
	-0.8365 lb/hr *	5900 hr/yr /	2000 lb/ton =	-2.4677 ton/yr

Therefore, change in PM emissions are as follows:

Increases: 16.644 ton/yr  
 Decreases: -34.33528 ton/yr

		Sulfur Dioxide			
		AFTER	BEFORE	CHANGE	
LA-62C	Outdoor Steep Tank	0.68 lb/hr -	0 lb/hr =	0.68 lb/hr	2.98 ton/yr
LA-62D	Outdoor Steep Tank	0.68 lb/hr -	0 lb/hr =	0.68 lb/hr	2.98 ton/yr
LA-77	Feedhouse Aspiration Scrubber	24.82 lb/hr -	5.9 lb/hr =	18.92 lb/hr	
LA-67	Fiber Dryer Scrubber	26.12 lb/hr -	26.12 lb/hr =	0 lb/hr	
LA-68	Gluten Dryer Scrubber	11.86 lb/hr -	11.86 lb/hr =	0 lb/hr	
LA-69	Germ/DR Scrubber	30.62 lb/hr -	30.62 lb/hr =	0 lb/hr	
LA-17B	Feed Cooler	0 lb/hr -	0 lb/hr =	0 lb/hr	
LA-49	Pellet Cooler #1	0 lb/hr -	0 lb/hr =	0 lb/hr	
LA-43	Pellet Cooler #2	0 lb/hr -	0 lb/hr =	0 lb/hr	
LA-75	Jet Foam Trap	167.7 lb/hr -	133.41 lb/hr =	34.29 lb/hr	150.19 ton/yr
LA-77	Hammermill Scrubber	0 lb/hr -	0 lb/hr =	0 lb/hr	
				TOTAL	156.15 ton/yr

The alternate operating scenario will be limited to 360 hours per year to avoid PSD requirements.

$$\frac{34.29 \text{ lb/hr} * 360 \text{ hr/yr}}{2000 \text{ lb/ton}} = 6.17 \text{ ton/yr}$$

TOTAL 12.13 ton/yr

		Volatile Organic Compounds			
		AFTER	BEFORE	CHANGE	
LA-62C	Outdoor Steep Tank	0.49 lb/hr -	0 lb/hr =	0.49 lb/hr	2.15 ton/yr
LA-62D	Outdoor Steep Tank	0.49 lb/hr -	0 lb/hr =	0.49 lb/hr	2.15 ton/yr
LA-77	Feedhouse Aspiration Scrubber	5.9 lb/hr -	5.9 lb/hr =	0 lb/hr	
LA-67	Fiber Dryer Scrubber	** emissions included in the calculation below **			
LA-68	Gluten Dryer Scrubber	133.3333 lb/hr -	100 lb/hr =	33.3333 lb/hr	146.00 ton/yr
LA-69	Germ/DR Scrubber	** emissions included in the calculation above **			
LA-17B	Feed Cooler	0 lb/hr -	0 lb/hr =	0 lb/hr	
LA-49	Pellet Cooler #1	0 lb/hr -	0 lb/hr =	0 lb/hr	
LA-43	Pellet Cooler #2	0 lb/hr -	0 lb/hr =	0 lb/hr	
LA-75	Jet Foam Trap	6.89 lb/hr -	5.53 lb/hr =	1.36 lb/hr	5.96 ton/yr
LA-77	Hammermill Scrubber	0 lb/hr -	0 lb/hr =	0 lb/hr	
				TOTAL	156.25 ton/yr

The following calculations determine changes in VOC emissions while factoring the effects of scrubbing, based on test data supplied by the applicant (testing in 3/1996 and 2/1999):

	Low-solubility VOC		High-solubility VOC		Total ton/yr
	ton/yr	efficiency	ton/yr	efficiency	
1994	276	0%	319	0%	595.0
1995	294	0%	343	0%	637.0
Average					616.0

Potential (1996)      464      8%      527      95%      453.2

There was a reduction of      162.77 tons VOC/year due to the 1995 debottlenecking project. This reduction was not quantified in the original permit.

The following calculations determine changes in VOC emissions after this modification

	Low-solubility VOC		High-solubility VOC		Total ton/yr
	ton/yr	efficiency	ton/yr	efficiency	
1998	427	8%	485	95%	417.1
1999	445	8%	506	95%	434.7
Average					425.9

Potential (2000)      583      8%      662      95%      569.5

The following table shows contemporaneous changes in emissions.

	PM	PM-10	SO2	VOC	CO	NOx
Proposed Project	16.6	16.6	12.13	156.3	0	0
Contemp. Increases (1995)	75.8	74.9	1.8	0.2	2.7	9.2
Total Increases	92.4	91.5	13.93	156.5	2.7	9.2
Contemp. Decreases(1995)	-303.4	-273.3	-84.9	-162.77	0	0
Contemp. Decreases(1999)	-2.5	-2.5	0	0	0	0
Project Decrease (2000)	-31.9	-31.9	0	0	0	0
Total Decreases	-337.8	-307.7	-84.9	-162.77	0	0
Net	-245.4	-216.2	-70.97	-6.27	2.7	9.2

The following calculations determine increases in HAP emissions after this modification (new and existing)

Acetaldehyde	1.906 lb/hr *	8760 hr/yr /	2000 lb/ton =	8.34828 ton/yr
Ethylene Glycol	0.2 lb/hr *	8760 hr/yr /	2000 lb/ton =	0.876 ton/yr
Formaldehyde	4 lb/hr *	8760 hr/yr /	2000 lb/ton =	17.52 ton/yr
Methanol	0.45 lb/hr *	8760 hr/yr /	2000 lb/ton =	1.971 ton/yr
<hr/>				TOTAL 28.7153 ton/yr

The following calculations determine increases in HAP emissions from new construction (LA-62C and LA-62D)

Acetaldehyde	0.006 lb/hr *	8760 hr/yr /	2000 lb/ton =	0.02628 ton/yr
Ethylene Glycol	0 lb/hr *	8760 hr/yr /	2000 lb/ton =	0 ton/yr
Formaldehyde	0 lb/hr *	8760 hr/yr /	2000 lb/ton =	0 ton/yr
Methanol	0 lb/hr *	8760 hr/yr /	2000 lb/ton =	0 ton/yr
<hr/>				TOTAL 0.02628 ton/yr

The following calculations determine equivalent coal sulfur content limits for 326 IAC 7-2-1:

$$\frac{6 \text{ lb SO}_2 *}{1000000 \text{ BTU}} \times \frac{11000 \text{ BTU} *}{\text{lb coal}} \times \frac{2000 \text{ lb/coal}}{38 \text{ lb SO}_@ \text{ at 1\%S}} = 3.4737$$

Coal must be equal to or less than 3.47 % sulfur to comply with the limit.

The following calculations converts existing SO2 concentration limits into pounds per hour:

$$\text{LA-67: } \frac{119000 \text{ acf/min} * 528 \text{ deg. R} * (100 - 0) \% \text{ moisture}}{(460 + 138) \text{ deg. R} * 100 \% \text{ moisture}} = 105070 \text{ dscf/min}$$

$$\text{LA-68: } \frac{152000 \text{ acf/min} * 528 \text{ deg. R} * (100 - 0) \% \text{ moisture}}{(460 + 138) \text{ deg. R} * 100 \% \text{ moisture}} = 134207 \text{ dscf/min}$$

$$\text{LA-69: } \frac{82600 \text{ acf/min} * 528 \text{ deg. R} * (100 - 0) \% \text{ moisture}}{(460 + 138) \text{ deg. R} * 100 \% \text{ moisture}} = 72931.1 \text{ dscf/min}$$

$$1 \text{ ppmv @ } 20 \text{ deg. C} * \frac{64 \text{ (mol wt)}}{0.02404 \text{ (conv. factor)}} = 2662.23 \text{ ug/m}^3$$

$$\frac{187 \text{ ppmv} * 2662.23 \text{ ug/m}^3 * 0.437 \text{ gr/dscf} * \text{lb} + 3.1\text{E-}05 \text{ lb/dscf}}{\text{ppm} \quad \text{g/m}^3 \quad 7000 \text{ gr}}$$

$$3.11\text{E-}05 \text{ lb/cf} * 105070 \text{ cf/min} * 60 \text{ min/hr} = 195.93 \text{ lb/hr}$$

$$3.11\text{E-}05 \text{ lb/cf} * 134207 \text{ cf/min} * 60 \text{ min/hr} = 250.26 \text{ lb/hr}$$

$$3.11\text{E-}05 \text{ lb/cf} * 72931.1 \text{ cf/min} * 60 \text{ min/hr} = 136 \text{ lb/hr}$$

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$$582.19 \text{ lb/hr}$$

Fiber Dryer	Inlet ppm	Inlet lb/hr	Outlet ppm	Outlet lb/hr	Control Efficiency (based on lb/hr)
acetaldehyde	10.800	4.310	5.030	1.950	54.76%
methanol	6.030	1.750	5.880	1.660	5.14%
ethanol	76.600	31.800	93.600	38.000	-19.50%
propionaldehyde	2.830	1.480	2.400	1.220	17.57%
2-propanol	0.216	0.123	ND	ND	100.00%
isobutyraldehyde	0.438	0.286	0.290	0.183	36.01%
n-propanol	0.264	0.143	0.455	0.239	-67.13%
butyraldehyde	0.153	0.098	0.118	0.080	18.71%
2-butanol	0.350	0.234	0.463	0.308	-31.48%
ethyl acetate	0.289	0.232	0.315	0.245	-5.60%
n-butanol	5.610	3.760	0.960	0.620	83.51%
ethylene glycol	ND	ND	ND	ND	ERR
2-methyl-butanol	ND	ND	ND	ND	ERR
2,3-butandiol	ND	ND	ND	ND	ERR
butyl acetate	ND	ND	ND	ND	ERR
furfurol	1.150	0.999	1.480	1.250	-25.13%
hydrogen sulfide	ND	ND	ND	ND	ERR
methyl mercaptan	ND	ND	ND	ND	ERR
dimethyl sulfide	ND	ND	ND	ND	ERR
dimethyl disulfide	ND	ND	ND	ND	ERR
formaldehyde	0.489	0.132	1.820	0.482	-265.15%
acetic acid	23.300	12.600	6.060	3.160	74.92%
lactic acid	53.100	22.100	0.977	0.385	98.26%
formic acid	3.410	2.770	ND	ND	100.00%
		82.817		49.781	39.89%

Gluten Dryer	Inlet ppm	Inlet lb/hr	Outlet ppm	Outlet lb/hr	Control Efficiency (based on lb/hr)
acetaldehyde	2.580	1.550	ND	ND	100.00%
methanol	0.457	0.203	ND	ND	100.00%
ethanol	32.400	20.400	34.200	22.800	-11.76%
propionaldehyde	0.703	0.558	0.353	0.475	14.93%
2-propanol	0.089	0.072	ND	ND	100.00%
isobutyraldehyde	ND	ND	0.265	0.276	ERR
n-propanol	ND	ND	0.281	0.244	ERR
butyraldehyde	ND	ND	0.162	0.170	ERR
2-butanol	0.083	0.084	0.417	0.445	-428.29%
ethyl acetate	0.059	0.071	0.088	0.115	-61.97%
n-butanol	0.675	0.684	0.293	0.314	54.09%
ethylene glycol	ND	ND	ND	ND	ERR
2-methyl-butanol	ND	ND	ND	ND	ERR
2,3-butandiol	ND	ND	ND	ND	ERR
butyl acetate	ND	ND	ND	ND	ERR
furfurol	ND	ND	ND	ND	ERR
hydrogen sulfide	ND	ND	ND	ND	ERR
methyl mercaptan	ND	ND	ND	ND	ERR
dimethyl sulfide	ND	ND	ND	ND	ERR
dimethyl disulfide	ND	ND	ND	ND	ERR
formaldehyde	0.264	0.109	0.222	0.097	11.38%
acetic acid	2.230	1.830	ND	ND	100.00%
lactic acid	10.500	6.620	ND	ND	100.00%
formic acid	ND	ND	ND	ND	ERR
		32.182		24.936	22.52%

GR Dryer			Germ Dryer		
	Inlet ppm	Inlet lb/hr		Inlet ppm	Inlet lb/hr
acetaldehyde	27.200	4.130	acetaldehyde	110.000	0.404
methanol	7.390	0.817	methanol	204.000	0.552
ethanol	2364.300	16.930	ethanol	2314.000	8.950
propionaldehyde	0.710	0.141	propionaldehyde	ND	ND
2-propanol	2.110	0.437	2-propanol	ND	ND
isobutyraldehyde	0.471	0.117	isobutyraldehyde	5.570	0.033
n-propanol	0.155	0.032	n-propanol	8.220	0.041
butyraldehyde	ND	ND	butyraldehyde	4.060	0.024
2-butanol	1.360	0.346	2-butanol	16.100	0.100
ethyl acetate	0.279	0.084	ethyl acetate	ND	ND
n-butanol	24.100	6.150	n-butanol	131.000	0.809
ethylene glycol	ND	ND	ethylene glycol	ND	ND
2-methyl-butanol	ND	ND	2-methyl-butanol	ND	ND
2,3-butandiol	ND	ND	2,3-butandiol	ND	ND
butyl acetate	ND	ND	butyl acetate	ND	ND
furfurol	2.870	0.950	furfurol	24.200	0.191
hydrogen sulfide	4.350	0.511	hydrogen sulfide	NT	NT
methyl mercaptan	2.370	0.392	methyl mercaptan	NT	NT
dimethyl sulfide	ND	ND	dimethyl sulfide	NT	NT
dimethyl disulfide	ND	ND	dimethyl disulfide	NT	NT
formaldehyde	16.600	1.720	formaldehyde	4.060	0.012
acetic acid	106.000	21.900	acetic acid	664.000	3.420
lactic acid	199.000	31.600	lactic acid	133.000	0.509
formic acid	13.400	4.160	formic acid	17.600	0.137
		90.417			15.181

germ/GR dryers	Inlets ppm	Inlets lb/hr	Outlet ppm	Outlet lb/hr	Control Efficiency (based on lb/hr)
acetaldehyde	137.200	4.534	21.500	3.640	19.72%
methanol	211.390	1.369	12.200	1.500	-9.60%
ethanol	4678.300	25.880	90.400	16.100	37.79%
propionaldehyde	0.710	0.141	3.920	0.881	-523.35%
2-propanol	2.110	0.437	1.060	0.245	43.94%
isobutyraldehyde	6.041	0.149	0.770	0.215	-43.84%
n-propanol	8.375	0.073	0.433	0.100	-36.43%
butyraldehyde	4.060	0.024	ND	ND	100.00%
2-butanol	17.460	0.446	0.055	0.016	96.48%
ethyl acetate	0.279	0.084	ND	ND	100.00%
n-butanol	155.100	6.959	0.410	0.116	98.33%
ethylene glycol	NA	NA	ND	ND	ERR
2-methyl-butanol	NA	NA	ND	ND	ERR
2,3-butandiol	NA	NA	ND	ND	ERR
butyl acetate	NA	NA	ND	ND	ERR
furfurol	27.070	1.141	1.870	0.695	39.09%
hydrogen sulfide	4.350	0.511	4.800	0.634	-24.07%
methyl mercaptan	2.370	0.392	1.597	0.302	22.87%
dimethyl sulfide	NA	NA	ND	ND	ERR
dimethyl disulfide	NA	NA	ND	ND	ERR
formaldehyde	20.660	1.732	5.910	0.684	60.50%
acetic acid	770.000	25.320	1.580	0.365	98.56%
lactic acid	332.000	32.109	ND	ND	100.00%
formic acid	31.000	4.297	ND	ND	100.00%
		105.598		25.493	75.86%

Pollutant:	Fiber Dryer (lb/hr)	Gluten Dryer (lb/hr)	Germ/GR (lb/hr)	Total (lb/hr)
acetaldehyde	1.950	ND	3.640	5.590
methanol	1.660	ND	1.500	3.160
ethanol	38.000	22.800	16.100	76.900
propionaldehyde	1.220	0.475	0.881	2.576
2-propanol	ND	ND	0.245	0.245
isobutyraldehyde	0.183	0.276	0.215	0.674
n-propanol	0.239	0.244	0.100	0.583
butyraldehyde	0.080	0.170	ND	0.250
2-butanol	0.308	0.445	0.016	0.768
ethyl acetate	0.245	0.115	ND	0.360
n-butanol	0.620	0.314	0.116	1.050
ethylene glycol	ND	ND	ND	0.000
2-methyl-butanol	ND	ND	ND	0.000
2,3-butandiol	ND	ND	ND	0.000
butyl acetate	ND	ND	ND	0.000
furfurol	1.250	ND	0.695	1.945
hydrogen sulfide	ND	ND	0.634	0.634
methyl mercaptan	ND	ND	0.302	0.302
dimethyl sulfide	ND	ND	ND	0.000
dimethyl disulfide	ND	ND	ND	0.000
formaldehyde	0.482	0.097	0.684	1.263
acetic acid	3.160	ND	0.365	3.525
lactic acid	0.385	ND	ND	0.385
formic acid	ND	ND	ND	0.000
<b>Total (excludes hydrogen sulfide)</b>				<b>99.576 lb/hr at outlet</b>

Inlet	Fiber Dryer (lb/hr)	Gluten Dryer (lb/hr)	GR Dryer (lb/hr)	Germ Dryer (lb/hr)	Total (lb/hr)
acetaldehyde	4.310	1.550	4.130	0.404	10.394
methanol	1.750	0.203	0.817	0.552	3.322
ethanol	31.800	20.400	16.930	8.950	78.080
propionaldehyde	1.480	0.558	0.141	ND	2.180
2-propanol	0.123	0.072	0.437	ND	0.632
isobutyraldehyde	0.286	ND	0.117	0.033	0.435
n-propanol	0.143	ND	0.032	0.041	0.216
butyraldehyde	0.098	ND	ND	0.024	0.122
2-butanol	0.234	0.084	0.346	0.100	0.764
ethyl acetate	0.232	0.071	0.084	ND	0.387
n-butanol	3.760	0.684	6.150	0.809	11.403
ethylene glycol	ND	ND	ND	ND	0.000
2-methyl-butanol	ND	ND	ND	ND	0.000
2,3-butandiol	ND	ND	ND	ND	0.000
butyl acetate	ND	ND	ND	ND	0.000
furfurol	0.999	ND	0.950	0.191	2.140
hydrogen sulfide	ND	ND	0.511	NT	0.511
methyl mercaptan	ND	ND	0.392	NT	0.392
dimethyl sulfide	ND	ND	ND	NT	0.000
dimethyl disulfide	ND	ND	ND	NT	0.000
formaldehyde	0.132	0.109	1.720	0.012	1.973
acetic acid	12.600	1.830	21.900	3.420	39.750
lactic acid	22.100	6.620	31.600	0.509	60.829
formic acid	2.770	ND	4.160	0.137	7.067
Totals (excludes hydrogen sulfide)					220.086 lb/hr at inlet

Overall VOC removal: 54.756%