

**CONSTRUCTION PERMIT  
OFFICE OF AIR MANAGEMENT**

**Cargill Grain Division - Boston Facility  
State Road 122 West  
Boston, Indiana 47324**

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP-177-9727-00089	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

## 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.2 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

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The Permittee owns and operates stationary grain elevator.

Responsible Official: Kenneth R. Madden  
Source Address: State Road 122 West, Boston, Indiana 47324  
Mailing Address: P. O. Box 77, Boston, Indiana 47324  
SIC Code: 5153  
County Location: Wayne  
County Status: Attainment for all criteria pollutants  
Source Status: Part 70 Permit Program  
Minor Source, under PSD Rules;

### A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) One (1) totally enclosed grain receiving operation identified as DP, with a maximum capacity of 10,000 bushels per hour;
- (b) One (1) grain shipping operation containing the following:
  - (1) truck load-out identified as TLL receives grain from bin 7 or dryleg (DL) with maximum capacity of 5,000 bushels per hour,
  - (2) rail load-outs identified as RLL receives grain from bins 8 through 11 or a bulk weight scale (BWS) with maximum capacity of 10,000 bushels per hour.
- (c) One (1) bin loading operation into bins 1 through 6, 8 through 11 identified as BL, with a maximum capacity of 10,000 bushels per hour;
- (d) One (1) internal handling operation containing the following:
  - (1) one (1) receiving leg identified as RL receives grain from bins 1 through 7 and transfers either into bins 1 through 11 at maximum rate of 10,000 bushels per hour;
  - (2) one (1) wet leg identified as WL receives grain from bins 2, 3 or 6 with a maximum rate of 7,000 bushels per hour and transfers to a dryer D-3;
  - (3) one (1) dry leg identified as DL receives dry grain from bins 2,3,6 or a dryer D-3 at a maximum rate of 7,000 bushels per hour;
  - (4) one (1) back leg identified as BKL receives from an enclosed area at maximum rate of 5,000 bushels per hour and transfers to bins 8 and 9 or the rail load-out (RLL);

- (5) bulk weight scale identified as BWS, with a maximum capacity of 20,000 bushels per hour.
- (e) Eleven (11) bins are identified as B<sub>1</sub> to B<sub>11</sub> with a total storage capacity of 498,915 bushels and one (1) temporary storage with a capacity of 272,800 bushels;
- (f) One (1) liquid petroleum gas (LPG) fired grain column dryer identified as D-3 rated at 16.10 million British thermal units per hour (mmBtu/hr), with a maximum drying capacity of 3000 bushels per hour.

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

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This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22).

The Permittee is subject to the requirement of Part 70 permit. However, the Permittee chose to operate the source under the Permit by Rule, 326 IAC 2-10.

**SECTION B**

**GENERAL CONDITIONS**

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

**Construction Conditions [326 IAC 2-1-3.2]**

**B.1 General Construction Conditions**

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- (a) The data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).
- (b) This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

**B.2 Effective Date of the Permit [IC13-15-5-3]**

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Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

**B.3 Revocation of Permits [326 IAC 2-1-9(b)]**

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Pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

**B.4 Permit Review Rules [326 IAC 2]**

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Notwithstanding Operation Condition No. B.5, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

**B.5 First Time Operation Permit [326 IAC 2-1-4]**

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This document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

- (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
- (d) The Permittee is subject to the requirement of Part 70 permit. However, the Permittee chose to operate the source under the Permit by Rule, 326 IAC 2-10.

**Operation Conditions**

**B.6 General Operation Conditions**

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- (a) The data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).
- (b) The Permittee shall comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC13-17) and the rules promulgated thereunder.

**B.7. Preventive Maintenance Plan [326 IAC 1-6-3]**

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Pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:

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

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

**B.8 Transfer of Permit [326 IAC 2-1-6]**

Pursuant to 326 IAC 2-1-6 (Transfer of Permits):

- (a) In the event that ownership of this grain elevator operation is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
- (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.
- (c) The OAM shall reserve the right to issue a new permit.

**B.9 Permit Revocation [326 IAC 2-1-9]**

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

**B.10 Availability of Permit [326 IAC 2-1-3(I)]**

Pursuant to 326 IAC 2-1-3(I), the Permittee shall maintain the applicable permit on the premises of the source and shall make this permit available for inspection by the IDEM, or other public official having jurisdiction.

**SECTION C**

**SOURCE OPERATION CONDITIONS**

Entire Source

**Emission Limitations and Standards**

**C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]**

- (a) The total source potential to emit particulate matter less than 10 microns (PM<sub>10</sub>) is limited to less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.

C.2 Notice of Malfunction [326 IAC 1-6-2]

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this permit:

- (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings, as determined in 326 IAC 5-1-4.
- (b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

C.4 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.5 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.

C.6 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.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]

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

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
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 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 mandatory 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

### 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 methods 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 the Commissioner, 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

### C.9 Compliance Monitoring [326 IAC 2-1-3]

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Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend compliance schedule 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.10 Monitoring Methods [326 IAC 3]

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Any monitoring or testing performed to meet the applicable requirements 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.

## Corrective Actions and Response Steps

### C.11 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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 180 days from the date on which this construction permit issued.

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.12 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-1-3]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective 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 corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(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. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

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**

#### **C.13 Emission Statement [326 IAC 2-6]**

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- (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.14 Monitoring Data Availability [326 IAC 2-1-3]**

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- (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.15 General Record Keeping Requirements [326 IAC 2-1-3]

- (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 and available upon the request of an IDEM, OAM, representative. 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 written 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 applicable:
  - (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 applicable:
  - (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 shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

**C.16 General Reporting Requirements [326 IAC 2-1-3]**

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- (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.
- (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 quarterly report shall be submitted within thirty (30) days of the end of the reporting period.
- (e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports.
- (f) Any corrective actions or 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.

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).

**Stratospheric Ozone Protection**

**C.17 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

- (a) One (1) totally enclosed grain receiving operation identified as DP, with a maximum capacity of 10,000 bushels per hour;
- (b) One (1) grain shipping operation containing the following:
- (1) truck load-out identified as TLL receives grain from bin 7 or dryleg (DL) with maximum capacity of 5,000 bushels per hour,
  - (2) rail load-outs identified as RLL receives grain from bins 8 through 11 or a bulk weight scale (BWS) with maximum capacity of 10,000 bushels per hour.
- (c) One (1) bin loading operation into bins 1 through 6, 8 through 11 identified as BL, with a maximum capacity of 10,000 bushels per hour;
- (d) One (1) internal handling operation containing the following:
- (1) one (1) receiving leg identified as RL receives grain from bins 1 through 7 and transfers either into bins 1 through 11 at maximum rate of 10,000 bushels per hour;
  - (2) one (1) wet leg identified as WL receives grain from bins 2, 3 or 6 with a maximum rate of 7,000 bushels per hour and transfers to a dryer D-3;
  - (3) one (1) dry leg identified as DL receives dry grain from bins 2,3, 6 or a dryer D-3 at a maximum rate of 7,000 bushels per hour;
  - (4) one (1) back leg identified as BKL receives from an enclosed area at maximum rate of 5,000 bushels per hour and transfers to bins 8 and 9 or the rail load-out (RLL);
  - (5) bulk weight scale identified as BWS, with a maximum capacity of 20,000 bushels per hour.
- (e) Eleven (11) bins are identified as B<sub>1</sub> to B<sub>11</sub> with a total storage capacity of 498,915 bushels and one (1) temporary storage with a capacity of 272,800 bushels;
- (f) One (1) liquid petroleum gas (LPG) fired grain column dryer identified as D-3 rated at 16.10 million British thermal units per hour (mmBtu/hr), with a maximum drying capacity of 3000 bushels per hour.

## Emission Limitations and Standards

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

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the grain receiving operation (DP), grain shipping operation (TLL, RLL), bin loading operation (BL), internal handling operation (RL, WL, DL, BKL), grain dryer (D-3) shall not exceed 62.40, 54.70, 62.20, 70.30, 62.20, 58.30, 58.30, 54.70 and 49.55 pounds per hour when operating at a process weight rate of 280, 140, 280, 560, 280, 196, 196, 140 and 84 tons per hour, respectively.

The pounds per hour limitation was calculated with the following equation:

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

$$E = 55.0 P^{0.11} - 40$$

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

#### D.1.2 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

- (a) The input grain at the each facilities identified as the grain receiving operation (DP), grain shipping operation (TLL, RLL), bin loading operation (BL), internal handling operation (RL, WL, DL, BKL), grain dryer (D-3) shall be limited to 26,280,000 bushels per year, rolled on a monthly basis. This throughput limitation is equivalent to PM and PM<sub>10</sub> emissions of 246.90 and 152.20 tons per year, respectively, rolled on a monthly basis.
- (b) During the first 12 months of operation, the input grains at each facilities identified as the grain receiving operation (DP), grain shipping operation (TLL, RLL), bin loading operation (BL), internal handling operation (RL, WL, DL, BKL), grain dryer (D-3) shall be limited to such that the total input divided by the accumulated month of operation shall not exceed 35,040,000 bushels per year divided by twelve(12) months, which equals 2,190,000 bushels per month.

Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

#### D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the grain receiving operation (DP), grain shipping operation (TLL, RLL), bin loading operation (BL), internal handling operation (RL, WL, DL, BKL), grain dryer (D -3).

### **Compliance Determination Requirements**

#### D.1.4 Testing Requirements

The Permittee is not required to test the facilities identified as grain receiving operation (DP), grain shipping operation (TLL, RLL), bin loading operation (BL), internal handling operation (RL, WL, DL, BKL), grain dryer (D-3) by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facilities are in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.1.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

### **Record Keeping and Reporting Requirement**

#### D.1.5 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.2 shall be submitted to the address(es) 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 quarter being reported.

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

**Quarterly Report**

Source Name: Cargill Grain Division - Boston Facility  
Source Address: State Road 122 West, Boston, Indiana 47324  
Mailing Address: P. O. Box 77, Boston, Indiana 47324  
CP No.: CP- 177-9727-00089  
Facility: grain receiving operation (DP), grain shipping operation (TLL, RLL), bin loading operation (BL), internal handling operation (RL, WL, DL, BKL), grain dryer (D-3)  
Parameter: PM and PM<sub>10</sub>  
Limit: 26,280,000 bushels per year, rolled on a monthly basis.  
First Year Limit: 2,190,000 bushels per month.

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

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

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

**MALFUNCTION REPORT**

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
FAX NUMBER - 317 233-5967**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE: IT HAS POTENTIAL TO EMIT 25 LBS/HR PARTICULATES ?\_\_\_\_, 100 LBS/HR VOC ?\_\_\_\_, 100 LBS/HR SULFUR DIOXIDE ?\_\_\_\_ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ?\_\_\_\_ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION \_\_\_\_\_.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC \_\_\_\_\_ OR, PERMIT CONDITION # \_\_\_\_\_ AND/OR PERMIT LIMIT OF \_\_\_\_\_

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ?    Y        N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ?    Y        N

COMPANY: Cargill Grain Division - Boston Facility    PHONE NO. ( 765) 935 - 1621  
LOCATION: (CITY AND COUNTY): Boston, Wayne  
PERMIT NO. 177-9727    AFS PLANT ID: 177-00089    AFS POINT ID: \_\_\_\_\_    INSP: Warren J. Greiling  
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: \_\_\_\_\_

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/ 19\_\_\_\_    AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: \_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/ 19\_\_\_\_    \_\_\_\_\_ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: \_\_\_\_\_

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_  
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_  
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_  
INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

**Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

**326 IAC 1-6-1            Applicability of rule**

Sec. 1. The requirements of this rule (326 IAC 1-6) shall apply to the owner or operator of any facility which has the potential to emit twenty-five (25) pounds per hour of particulates, one hundred (100) pounds per hour of volatile organic compounds or SO<sub>2</sub>, or two thousand (2,000) pounds per hour of any other pollutant; or to the owner or operator of any facility with emission control equipment which suffers a malfunction that causes emissions in excess of the applicable limitation.

**326 IAC 1-2-39            “Malfunction” definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. (Air Pollution Control Board; 326 IAC 1-2-39; filed Mar 10, 1988, 1:20 p.m. : 11 IR 2373)

**\*Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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## Indiana Department of Environmental Management Office of Air Management

### Technical Support Document (TSD) for New Construction and Operation

#### Source Background and Description

Source Name: Cargill Grain Division - Boston Facility  
Source Location: State Road 122 West, Boston, Indiana 47324  
County: Wayne  
Construction Permit No.: CP-177-9727-00089  
SIC Code: 5153  
Permit Reviewer: Manoj P. Patel

The Office of Air Management (OAM) has reviewed an application from Cargill Grain Division - Boston Facility relating to the construction and operation of a grain elevator operation, consisting of the following equipment:

- (a) One (1) totally enclosed grain receiving operation identified as DP, with a maximum capacity of 10,000 bushels per hour;
- (b) One (1) grain shipping operation containing the following:
  - (1) truck load-out identified as TLL receives grain from bin 7 or dryleg (DL) with maximum capacity of 5,000 bushels per hour,
  - (2) rail load-outs identified as RLL receives grain from bins 8 through 11 or a bulk weight scale (BWS) with maximum capacity of 10,000 bushels per hour.
- (c) One (1) bin loading operation into bins 1 through 6, 8 through 11 identified as BL, with a maximum capacity of 10,000 bushels per hour;
- (d) One (1) internal handling operation containing the following:
  - (1) one (1) receiving leg identified as RL receives grain from bins 1 through 7 and transfers either into bins 1 through 11 at maximum rate of 10,000 bushels per hour;
  - (2) one (1) wet leg identified as WL receives grain from bins 2, 3 or 6 with a maximum rate of 7,000 bushels per hour and transfers to a dryer D-3;
  - (3) one (1) dry leg identified as DL receives dry grain from bins 2,3 ,6 or a dryer D-3 at a maximum rate of 7,000 bushels per hour;
  - (4) one (1) back leg identified as BKL receives from an enclosed area at maximum rate of 5,000 bushels per hour and transfers to bins 8 and 9 or the rail load-out (RLL);
  - (5) bulk weight scale identified as BWS, with a maximum capacity of 20,000 bushels per hour.
- (e) Eleven (11) bins are identified as B<sub>1</sub> to B<sub>11</sub> with a total storage capacity of 498,915 bushels and one (1) temporary storage with a capacity of 272,800 bushels;

- (f) One (1) liquid petroleum gas (LPG) fired grain column dryer identified as D-3 rated at 16.10 million British thermal units per hour (mmBtu/hr), with a maximum drying capacity of 3000 bushels per hour.

The company has requested to cease operation of the liquid petroleum fired grain dryers identified as D-1 rated at 12 MMBTU/hr and D-2 rated at 5 mmBtu/hr and physically remove from the service. These dryers are constructed and operated without a valid permit from OAM.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
*EP1	Grain Dryer	25 - 75	23	227,400	210
* Emissions are exhausted from perforated plates.					

### Enforcement Issue

IDEM is aware that this grain elevator operation has been constructed prior to receipt of the proper permit. IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules. The OAM is forwarding an enforcement referral to the Office of Enforcement (OE) regarding this issue.

### Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, 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 April 29, 1998, with additional information received on June 24, 1998.

### Emissions Calculations

- (a) See Appendix A (Emissions Calculation Spreadsheets) for liquid petroleum gas fired grain dryer (D-3) detailed calculations.
- (b) See Appendix B (Emissions Calculation Spreadsheet) for receiving, shipping, internal handling, bin loading operation at the source.

### Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	2059.60	658.20
Particulate Matter (PM10)	318.20	318.20
Sulfur Dioxide (SO <sub>2</sub> )	0.10	0.10
Volatile Organic Compounds (VOC)	0.40	0.40
Carbon Monoxide (CO)	2.40	2.40
Nitrogen Oxides (NO <sub>x</sub> )	14.20	14.20
Single Hazardous Air Pollutant (HAP)	0.0	0.0
Combination of HAPs	0.0	0.0

(a) Allowable emissions are determined from the applicability of rule 326 IAC 6-3.

(1) Grain Receiving Operation (DP):

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

$$\begin{aligned} E &= 55.0 (280)^{0.11} - 40 \\ &= 55.0 (1.86) - 40 \\ &= 102.20 - 40 \\ &= 62.20 \text{ lbs./hr} \\ &= 272.52 \text{ tons/year} \end{aligned}$$

(2) Grain Shipping Operation (TLL, RLL):

(A) Rail Load-out (RLL):

$$\begin{aligned} E &= 55.0 (280)^{0.11} - 40 \\ &= 55.0 (1.86) - 40 \\ &= 102.20 - 40 \\ &= 62.20 \text{ lbs./hr} \\ &= 272.52 \text{ tons/year} \end{aligned}$$

(B) Truck Load-out (TLL):

$$\begin{aligned} E &= 55.0 (140)^{0.11} - 40 \\ &= 55.0 (1.72) - 40 \\ &= 94.70 - 40 \\ &= 54.70 \text{ lbs./hr} \\ &= 239.60 \text{ tons/year} \end{aligned}$$

(3) Bin Loading Operation (B<sub>1</sub> to B<sub>11</sub>):

$$\begin{aligned} E &= 55.0 (560)^{0.11} - 40 \\ &= 55.0 (2.0) - 40 \\ &= 110.30 - 40 \end{aligned}$$

$$\begin{aligned} &= 70.30 \text{ lbs./hr} \\ &= 307.90 \text{ tons/year} \end{aligned}$$

(4) Internal Handling Operation:

(A) Receiving Leg (RL):

$$\begin{aligned} E &= 55.0 (280)^{0.11} - 40 \\ &= 55.0 (1.86) - 40 \\ &= 102.20 - 40 \\ &= 62.20 \text{ lbs./hr} \\ &= 272.40 \text{ tons/year} \end{aligned}$$

(B) Wet Leg (WL):

$$\begin{aligned} E &= 55.0 (196)^{0.11} - 40 \\ &= 55.0 (1.78) - 40 \\ &= 98.30 - 40 \\ &= 58.30 \text{ lbs./hr} \\ &= 255.30 \text{ tons/year} \end{aligned}$$

(C) Dry Leg (DL):

$$\begin{aligned} E &= 55.0 (196)^{0.11} - 40 \\ &= 55.0 (1.78) - 40 \\ &= 98.30 - 40 \\ &= 58.30 \text{ lbs./hr} \\ &= 255.30 \text{ tons/year} \end{aligned}$$

(D) Back Leg (BKL):

$$\begin{aligned} E &= 55.0 (140)^{0.11} - 40 \\ &= 55.0 (1.72) - 40 \\ &= 94.70 - 40 \\ &= 54.70 \text{ lbs./hr} \\ &= 239.60 \text{ tons/year} \end{aligned}$$

(5) Grain Dryer Operation (D-3):

$$\begin{aligned} E &= 55.0 (84)^{0.11} - 40 \\ &= 55.0 (1.62) - 40 \\ &= 89.50 - 40 \\ &= 49.55 \text{ lbs./hr} \\ &= 217.0 \text{ tons/year} \end{aligned}$$

- (b) The potential emissions before control are less than the allowable emissions, therefore, the potential emissions before control are used for the permitting determination.

- (c) Allowable emissions (as defined in the Indiana Rule) of particulate matter (PM) and oxides of nitrogen (NO<sub>x</sub>) are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

### County Attainment Status

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Wayne County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Wayne County has been classified as attainment or unclassifiable for all other criteria 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.

### Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	246.90
PM <sub>10</sub>	152.20
SO <sub>2</sub>	0.10
VOC	0.40
CO	2.40
NO <sub>x</sub>	14.20
Single HAP	0.0
Combination HAPs	0.0

- (a) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.
- (b) The particulate matter (PM) and particulate matter less than 10 microns (PM<sub>10</sub>) are limited to 246.90 and 152.20 tons/yr, respectively. This limit is equivalent to 26,280,000 bushels grain per year. See Appendix C of this TSD for limited emissions.

### Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) at least one of the criteria pollutant is greater than or equal to 100 tons per year,

The source indicated that they will operate under the Permit by Rule Program (326 IAC 2-10).

### Federal Rule Applicability

- (a) 40 CFR Part 60, Subpart DD, Standards of Performance for Grain Elevators  
This grain elevator is not subject to the New Source Performance standard 326 IAC 12 and 40 CFR Part 60.300 through 60.304, Subpart DD because the grain elevator has the storage capacity of 762,700 bushels, which is less than 1 million bushels for grain storage elevator.
- (b) There are no National Emission Standards for Hazardous Air pollutants (326 IAC 14) 40 CFR Part 63 applicable to this source.

### State Rule Applicability

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

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 100 tons/yr of particulate matter less than 10 microns. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

#### 326 IAC 5-1-2 (Visible Emission Limitations)

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

- (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.  
(b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

#### 326 IAC 6-3 (Process Operations)

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the grain receiving operation (DP), grain shipping operation (TLL, RLL), bin loading operation (BL), internal handling operation (RL, WL, DL, BKL), grain dryer (D-3) shall not exceed 62.20, 54.70, 62.20, 70.30, 62.20, 58.30, 58.30, 54.70 and 52.40 pounds per hour when operating at a process weight rate of 280, 140, 280, 560, 280, 196, 196, 140 and 112 tons per hour, respectively.

- (a) Grain Receiving Operation (DP): (P = 10, 000 bushels/hr = 280 tons/hr)

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

$$\begin{aligned} E &= 55.0 (280)^{0.11} - 40 \\ &= 55.0 (1.86) - 40 \\ &= 102.20 - 40 \\ &= 62.20 \text{ lbs./hr} \\ &= 272.52 \text{ tons/year} \end{aligned}$$

Potential PM emissions are less than the allowable emissions. So, grain receiving operation complies with 326 IAC 6-3-2.

(b) Grain Shipping Operation (TL, RL):

(1) Rail Load-out (RLL) (P = 10, 000 bushels/hr = 280 tons/hr)

$$\begin{aligned} E &= 55.0 (280)^{0.11} - 40 \\ &= 55.0 (1.86) - 40 \\ &= 102.20 - 40 \\ &= 62.20 \text{ lbs./hr} \\ &= 272.52 \text{ tons/year} \end{aligned}$$

(2) Truck Load-out (TLL) (P = 5, 000 bushels/hr = 140 tons/hr) :

$$\begin{aligned} E &= 55.0 (140)^{0.11} - 40 \\ &= 55.0 (1.72) - 40 \\ &= 94.70 - 40 \\ &= 54.70 \text{ lbs./hr} \\ &= 239.60 \text{ tons/year} \end{aligned}$$

Potential PM emissions are less than the allowable emissions. So, grain shipping operation complies with 326 IAC 6-3-2.

(c) Bin Loading Operation (B<sub>1</sub> to B<sub>11</sub>) (P = 20, 000 bushels/hr = 560 tons/year)

$$\begin{aligned} E &= 55.0 (560)^{0.11} - 40 \\ &= 55.0 (2.0) - 40 \\ &= 110.30 - 40 \\ &= 70.30 \text{ lbs./hr} \\ &= 307.90 \text{ tons/year} \end{aligned}$$

Potential PM emissions are less than the allowable emissions. So, bin loading operation complies with 326 IAC 6-3-2.

(d) Internal Handling Operation:

(1) Receiving Leg (RL) (P = 10, 000 bushels/hr = 560 tons/year):

$$\begin{aligned} E &= 55.0 (280)^{0.11} - 40 \\ &= 55.0 (1.86) - 40 \\ &= 102.20 - 40 \\ &= 62.20 \text{ lbs./hr} \\ &= 272.40 \text{ tons/year} \end{aligned}$$

(2) Wet Leg (WL) (P = 7, 000 bushels/hr = 196 tons/year):  
E = 55.0 (196)<sup>0.11</sup> - 40  
= 55.0 (1.78) - 40  
= 98.30 - 40  
= 58.30 lbs./hr  
= 255.30 tons/year

(3) Dry Leg (DL) (P = 7, 000 bushels/hr = 196 tons/year):  
E = 55.0 (196)<sup>0.11</sup> - 40  
= 55.0 (1.78) - 40  
= 98.30 - 40  
= 58.30 lbs./hr  
= 255.30 tons/year

(4) Back Leg (BKL) (P = 5, 000 bushels/hr = 140 tons/year):  
E = 55.0 (140)<sup>0.11</sup> - 40  
= 55.0 (1.72) - 40  
= 94.70 - 40  
= 54.70 lbs./hr  
= 239.60 tons/year

Potential PM emissions are less than the allowable emissions. So, internal grain handling operation complies with 326 IAC 6-3-2.

(e) Grain Dryer Operation (D-3) (P = 3000 bushels/hr = 84 tons/hr)  
E = 55.0 (84)<sup>0.11</sup> - 40  
= 55.0 (1.62) - 40  
= 89.50 - 40  
= 49.55 lbs./hr  
= 217.0 tons/year

Potential PM emissions are less than the allowable emissions. So, grain dryer complies with 326 IAC 6-3-2.

### Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants 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 air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

(a) None of these listed air toxics will be emitted from this proposed construction.

### Conclusion

The construction of this grain elevator operation will be subject to the conditions of the attached proposed **Construction Permit No. CP-177-9727-00089**.

Cargill Grain Division - Boston Facility  
P. O. Box 77  
Boston, Indiana 47324

**Affidavit of Construction**

I, \_\_\_\_\_, being duly sworn upon my oath, depose and say:  
(Name of the Authorized Representative)

1. I live in \_\_\_\_\_ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of \_\_\_\_\_ for \_\_\_\_\_.  
(Title) (Company Name)

3. By virtue of my position with \_\_\_\_\_, I have personal  
(Company Name)  
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of \_\_\_\_\_.  
(Company Name)

4. I hereby certify that Cargill Grain Division- Boston Facility, State Road 122 West, Boston, Indiana, 47324, has constructed the following:

(a) One (1) totally enclosed grain receiving operation identified as DP, with a maximum capacity of 10,000 bushels per hour;

(b) One (1) grain shipping operation containing the following:

(1) truck load-out identified as TLL receives grains from bin 7 or dryleg (DL) with maximum capacity of 5,000 bushels per hour,

(2) rail load-outs identified as RLL receives grains from bins 8 through 11 or a bulk weight scale (BWS) with maximum capacity of 10,000 bushels per hour.

(c) One (1) bin loading operation into bins 1 through 6, 8 through 11 identified as BL, with a maximum capacity of 10,000 bushels per hour;

(d) One (1) internal handling operation containing the following:

(1) one (1) receiving leg identified as RL receives grains from bins 1 through 7 and transfers either into bins 1 through 11 at maximum rate of 10,000 bushels per hour;

(2) one (1) wet leg identified as WL receives grains from bins 2, 3 or 6 with a maximum rate of 7,000 bushels per hour and transfers to a dryer D-3;

(3) one (1) dry leg identified as DL receives dry grains from bins 2,3 ,6 or a dryer D-3 at a maximum rate of 7,000 bushels per hour;

(4) one (1) back leg identified as BKL receives from an enclosed area at maximum rate of 5,000 bushels per hour and transfers to bins 8 and 9 or the rail load-out (RLL);

(5) bulk weight scale identified as BWS, with a maximum capacity of 20,000 bushels per hour.

(e) Eleven (11) bins are identified as B<sub>1</sub> to B<sub>11</sub> with a total storage capacity of 498,915 bushels and one (1) temporary storage with a capacity of 272,800 bushels;

(f) One (1) liquid petroleum gas (LPG) fired grain column dryer identified as D-3 rated at 16.10 million British thermal units per hour (mmBtu/hr), with a maximum drying capacity of 3000 bushels per hour.

in conformity with the requirements and intent of the construction permit application received by the Office of Air Management on April 29, 1998 and as permitted pursuant to **Construction Permit No. CP-177-9727, Plant ID No.**

**177-00089** issued on \_\_\_\_\_

5. I hereby certify that Cargill Grain Division - Boston Facility is now subject to the Title V program and

will submit a Title V (or FESOP or Permit by Rule) operating permit application within twelve (12) months from the postmarked submission date of this Affidavit of Construction.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

STATE OF INDIANA)  
  )SS

COUNTY OF \_\_\_\_\_ )

Subscribed and sworn to me, a notary public in and for \_\_\_\_\_ County and State of  
Indiana on this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_.

My Commission expires: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (typed or printed)

**Appendix B: Emissions Calculations**  
**Company Name: Cargill Grain Division - Boston Facility**  
**Address City IN Zip: State Road 122 West, Boston, Indiana 47324**  
**CP 177-9727**  
**Plt ID: 177-00089**  
**Reviewer: Manoj P. patel**  
**Date: June 26, 1998**

Process	Capacity bu/hour	Capacity ton./hr	Emission Factor in lb./ton		Emissions in tons/ year		C. E.	Controlled Emissions (t/y)	
			PM	PM10	PM	PM10		PM	PM10
<u>Receiving at Pit-1(Existing)</u>									
by straight truck	10000	280	0.18	0.059	220.75	72.36	80.00%	44.15	14.47
by hopper truck/rail	0	0	0.035	0.0078	0.00	0.00	0.00%	0.00	0.00
<u>Shipping of Grains</u>									
by truck load-out (TLL)	5,000	140	0.16	0.029	98.11	17.78	0.00%	98.11	17.78
By Railcar load-out (RLL)	5,000	140	0.027	0.0022	16.56	1.35	0.00%	16.56	1.35
<u>Grain Drying - Column</u>									
Dryer 3 (D-3)	3000	84	0.22	0.22	80.94	80.94	0.00%	80.94	80.94
<u>Internal Handling</u>									
Receiving Leg (RL)	10000	280	0.061	0.034	74.81	41.70	0.00%	74.81	41.70
Wet Leg (WL)	7000	196	0.061	0.034	52.37	29.19	0.00%	52.37	29.19
Dry Leg (DL)	7000	196	0.061	0.034	52.37	29.19	0.00%	52.37	29.19
Back Leg (BL)	5000	140	0.061	0.034	37.41	20.85	0.00%	37.41	20.85
Bin Loading (1-11)	10000	280	0.02	0.02	24.53	24.53	0.00%	24.53	24.53

657.84      317.88      481.24      260.00

**Methodology**

Emission Factors for all operations are taken from the Section 9.9.1, Table 4-22 Emission Factor Documentation for AP-42, July 1997.  
 Grain Receiving , shipping , Internal Handling system's throughput is taken from the construction Permit Application submitted to IDEM.  
 Grain Internal Handling Operation throughput is considered constant with the grain receiving and Shipping at the source.  
 Grain Dryer 3's throughput is taken from the construction permit Application.  
 Capacity in tons per hr = (capacity in bushels per hour) \* (56 lb./bu)\* (1 ton/2000 lb.)  
 PM Emissions in tons per year = (capacity in ton/hr) \* (e.f. in lb./ton)\* 4.38  
 PM10 Emissions in tons per year = (capacity in ton/hr) \* (e.f.PM10 in lb./ton)\* 4.38

**Appendix C: Limited Emissions Calculations**  
**Company Name: Cargill Grain Division - Boston Facility**  
**Address City IN Zip: State Road 122 West, Boston, Indiana 47324**  
**CP 177-9727**  
**Plt ID: 177-00089**  
**Reviewer: Manoj P. patel**  
**Date: June 26, 1998**

Process	Capacity bu/hour	Capacity ton./hr	Emission Factor in lb./ton		Emissions in tons/ year		C. E.	Controlled Emissions (t/y)	
			PM	PM10	PM	PM10		PM	PM10
<u>Receiving at Pit-1(Existing)</u>									
by straight truck	3000	84	0.18	0.059	66.23	21.71	85.00%	9.93	3.26
by hopper truck/rail	0	0	0.035	0.0078	0.00	0.00	0.00%	0.00	0.00
<u>Shipping of Grains</u>									
by truck load-out (TLL)	3,000	84	0.16	0.029	58.87	10.67	0.00%	58.87	10.67
By Railcar load-out (RLL)	0	0	0.027	0.0022	0.00	0.00	0.00%	0.00	0.00
<u>Grain Drying - Column</u>									
Dryer 3 (D-3)	3000	84	0.22	0.22	80.94	80.94	0.00%	80.94	80.94
<u>Internal Handling</u>									
Receiving Leg (RL)	3000	84	0.061	0.034	22.44	12.51	0.00%	22.44	12.51
Wet Leg (WL)	3000	84	0.061	0.034	22.44	12.51	0.00%	22.44	12.51
Dry Leg (DL)	3000	84	0.061	0.034	22.44	12.51	0.00%	22.44	12.51
Back Leg (BL)	3000	84	0.061	0.034	22.44	12.51	0.00%	22.44	12.51
Bin Loading (1-11)	3000	84	0.02	0.02	7.36	7.36	0.00%	7.36	7.36

303.17      170.71      246.87      152.26

**Methodology**

Emission Factors for all operations are taken from the Section 9.9.1, Table 4-22 Emission Factor Documentation for AP-42, July 1997.

Grain Receiving , shipping , Internal Handling system's throughput is taken from the construction Permit Application submitted to IDEM.

Grain Internal Handling Operation throughput is considered constant with the grain receiving and Shipping at the source.

Grain Dryer 3's throughput is taken from the construction permit Application.

Capacity in tons per hr = (capacity in bushels per hour) \* (56 lb./bu)\* (1 ton/2000 lb.)

PM Emissions in tons per year = (capacity in ton/hr) \* (e.f. in lb./ton)\* 4.38

PM10 Emissions in tons per year = (capacity in ton/hr) \* (e.f.PM10 in lb./ton)\* 4.38

**Appendix A: Emission Calculations**  
**LPG-Propane -Grain Dryer**  
**(Heat input capacity: > 10 MMBtu/hr and < 100 MMBtu/hr)**

**Company Name:** Cargill Grain Division  
**Address City IN Zip:** SR 122 West, Boston, IN 47324  
**CP:** 177-9727  
**Plt ID:** 177-00089  
**Reviewer:** Manoj P. Patel  
**Date:** May 20, 1998

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
kgals/year

SO2 Emission factor = 0.10 x S

S = Weight % Sulfur =

Emission Factor in lb/kgal	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	0.6	0.6	0.2 (0.10S)	19.0	0.5	3.2
Potential Emission in tons/yr	0.4	0.4	0.1	14.2	0.4	2.4

Methodology

1 gallon of LPG has a heating value of 94,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.094 MMBtu

Emission Factors are from AP42, Fifth Edition (January 1995), Table 1.5-2 (SCC #1-02-010-02)

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

**Appendix C: Limited Emissions Calculations**  
**Company Name: Cargill Grain Division - Boston Facility**  
**Address City IN Zip: State Road 122 West, Boston, Indiana 47324**  
**CP 177-9727**  
**Plt ID: 177-00089**  
**Reviewer: Manoj P. patel**  
**Date: June 26, 1998**

Process	Capacity bu/hour	Capacity ton./hr	Emission Factor in lb./ton		Emissions in tons/ year		C. E.	Controlled Emissions (t/y)	
			PM	PM10	PM	PM10		PM	PM10
<b>Receiving at Pit-1(Existing)</b>									
by straight truck	3000	84	0.18	0.059	66.23	21.71	85.00%	9.93	3.26
by hopper truck/rail	0	0	0.035	0.0078	0.00	0.00	0.00%	0.00	0.00
<b>Shipping of Grains</b>									
by truck load-out (TLL)	3,000	84	0.16	0.029	58.87	10.67	0.00%	58.87	10.67
By Railcar load-out (RLL)	0	0	0.027	0.0022	0.00	0.00	0.00%	0.00	0.00
<b>Grain Drying - Column</b>									
Dryer 3 (D-3)	3000	84	0.22	0.22	80.94	80.94	0.00%	80.94	80.94
<b>Internal Handling</b>									
Receiving Leg (RL)	3000	84	0.061	0.034	22.44	12.51	0.00%	22.44	12.51
Wet Leg (WL)	3000	84	0.061	0.034	22.44	12.51	0.00%	22.44	12.51
Dry Leg (DL)	3000	84	0.061	0.034	22.44	12.51	0.00%	22.44	12.51
Back Leg (BL)	3000	84	0.061	0.034	22.44	12.51	0.00%	22.44	12.51
Bin Loading (1-11)	3000	84	0.02	0.02	7.36	7.36	0.00%	7.36	7.36

303.17      170.71      246.87      152.26

**Methodology**

Emission Factors for all operations are taken from the Section 9.9.1, Table 4-22 Emission Factor Documentation for AP-42, July 1997.

Grain Receiving , shipping , Internal Handling system's throughput is taken from the construction Permit Application submitted to IDEM.

Grain Internal Handling Operation throughput is considered constant with the grain receiving and Shipping at the source.

Grain Dryer 3's throughput is taken from the construction permit Application.

Capacity in tons per hr = (capacity in bushels per hour) \* (56 lb./bu)\* (1 ton/2000 lb.)

PM Emissions in tons per year = (capacity in ton/hr) \* (e.f. in lb./ton)\* 4.38

PM10 Emissions in tons per year = (capacity in ton/hr) \* (e.f.PM10 in lb./ton)\* 4.38