CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT

Cargill Grain Division
6076 East Railroad Street
Monterey, Indiana 46960

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.

<table>
<thead>
<tr>
<th>Construction Permit No.</th>
<th>CP-131-10081-00001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issued by:</td>
<td>Paul Dubenetzy, Branch Chief</td>
</tr>
<tr>
<td></td>
<td>Office of Air Management</td>
</tr>
<tr>
<td>Issuance Date:</td>
<td></td>
</tr>
</tbody>
</table>
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

The Permittee owns and operates a grain elevator.

<table>
<thead>
<tr>
<th>Responsible Official:</th>
<th>James Keller</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Address:</td>
<td>6076 East Railroad Street, Monterey, Indiana 46960</td>
</tr>
<tr>
<td>Mailing Address:</td>
<td>6076 East Railroad Street, Monterey, Indiana 46960</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>5153</td>
</tr>
<tr>
<td>County Location:</td>
<td>Pulaski</td>
</tr>
<tr>
<td>County Status:</td>
<td>Attainment for all criteria pollutants</td>
</tr>
<tr>
<td>Source Status:</td>
<td>State Construction and Operation Permit Minor Source, under PSD Rules</td>
</tr>
</tbody>
</table>

A.2 Emission Units and Pollution Control Equipment Summary

This construction and operation approval consists of adding a new column grain dryer to the existing stationary source. The facilities covered by this approval are as follows:

(a) one (1) 1600 bushel per hour column grain dryer fired by natural gas with a maximum heat input rate of 15.0 million British thermal units per hour which was constructed in 1993,

(b) one (1) totally enclosed paddle conveyor designated C1 and capable of a maximum throughput of 7600 bushels per hour for conveyance of grain across the bin deck,

(c) one (1) totally enclosed bucket elevator designated as the dry leg L2 for conveyance of dried grain from the column grain dryer at a maximum rate of 6000 bushels per hour, and

(d) one (1) modified totally enclosed bucket elevator, formerly the dry leg for the dryer, to be designated as the wet leg L1 for conveyance of grain to the column grain dryer at a maximum rate of 6000 bushels per hour.

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

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

(1) at least one of the criteria pollutant is greater than or equal to 100 tons per year,
(2) a single hazardous air pollutant (HAP) is greater than or equal to 10 tons per year, or
(3) any combination of HAPs is greater than or equal to 25 tons/year.
(b) The source shall comply with 326 IAC 2-7-2 (Part 70) by complying with the limitations established under 326 IAC 2-10 and 326 IAC 2-11 ( Permit By Rule).

Section B  Construction Conditions

General Construction Conditions [326 IAC 2-1-3]

B.1 Allowable Emissions

That 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.2 General Rule Applicability

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.3 Effective Date of the Permit [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, Sections C and D.1 of this permit become effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1-9(b)]

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

B.5 Modification of Construction Conditions

Notwithstanding Condition B.6, all requirements of these construction conditions 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.6 First Time Operation Permit [326 IAC 2-1-4]

That 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 operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees) or the source shall comply with the requirements of 326 IAC 2-10 (Permit by rule).

Section C Source Operation Conditions

General Operation Conditions [326 IAC 2-1-4]

C.1 General Operation Conditions

(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 (IC 13-17) and the rules promulgated thereunder.

C.2 Preventive Maintenance Plan [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 lack of proper maintenance 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.

C.3 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 the grain dryer 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.

C.4 Permit Revocation [326 IAC 2-1-9(a)]

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).

C.5 Availability of Permit [326 IAC 2-1-3(l)]

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

C.6 Opacity Limitations [326 IAC 5-1-2]

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 40% in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed 60% for more than a cumulative total of 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.7 Emergency Reduction Plans [326 IAC 1-5-2]
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 calendar days from the issuance date of this permit.

(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 level. [326 IAC 1-5-3]

C.8 Malfunction Condition [326 IAC 1-6-2]
Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(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]

Compliance Monitoring Requirements

C.9 Compliance Monitoring

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 notify:

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.

C.10 Monitoring Methods [326 IAC 3]

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.

C.11 Compliance Monitoring Plan - Failure to Take Response Steps

(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.

Record Keeping and Reporting Requirements

C.12 General Record Keeping Requirements

(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 and available within one (1) hour upon verbal request of an IDEM, OAM representative, for a minimum of three (3) years. They may be stored elsewhere for the remaining two (2) years providing they are made available within thirty (30) days after written request.

(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. 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.13 General Reporting Requirements

(a) To affirm that the source has met all the requirements stated in this permit the source shall submit a Quarterly Compliance 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 must be clearly identified in such reports. A reportable 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) A malfunction as defined in 326 IAC 1-6-2; or

(3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance 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 or failure to monitor or record the required compliance monitoring is a deviation.

(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.

SECTION D.1 FACILITY OPERATION CONDITIONS

(a) one (1) 1600 bushel per hour column grain dryer fired by natural gas with a maximum heat input rate of 15.0 million British thermal units per hour which was constructed in 1993,

(b) one (1) totally enclosed paddle conveyor designated C1 and capable of a maximum throughput of 7600 bushels per hour for conveyance of grain across the bin deck,

(c) one (1) totally enclosed bucket elevator designated as the dry leg L2 for conveyance of dried grain from the column grain dryer at a maximum rate of 6000 bushels per hour, and

(d) one (1) modified totally enclosed bucket elevator, formerly the dry leg for the dryer, to be designated as the wet leg L1 for conveyance of grain to the column grain dryer at a maximum rate of 6000 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 tower grain dryer shall not exceed 44.2 pounds per hour when operating at a process weight rate of 48 tons per hour.

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:


\[ E = 55.0 \text{ P}^{0.11} - 40 \]

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

D.1.2 Fugitive Particulate Matter (PM) Emissions [40 CFR 60.300, NSPS Subpart DD]

Pursuant to 40 CFR 60.302 (Standard for particulate matter) for grain elevators, fugitive emissions from the grain handling operations associated with the Zimmerman grain dryer shall not exhibit greater than zero percent (0%) opacity. The column plate perforation of the grain dryer shall not be increased to greater than 2.4 millimeters in diameter (0.094 inches) without prior approval from the OAM.

Compliance Determination Requirements

D.1.3 Testing Requirements

Pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) and 40 CFR § 60.8 (Performance tests) performance tests shall be performed for opacity of the fugitive emissions from the grain handling operations associated with the grain dryer within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-6 (Source Sampling Procedures) and 40 CFR 60.11(b) using the methods specified in the rule or as approved by the Commissioner.

(a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.

(b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.

(c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.

(d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.

(e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

Compliance Monitoring Requirements

D.1.4 Particulate Matter (PM)

The perforation plate screens for PM control shall be properly in place at all times when the grain dryer is in operation.
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

COMPANY:_________________________________________________________PHONE NO. (          )_____________________________

LOCATION: (CITY AND COUNTY)____________________________________________________________________________________

PERMIT NO. _________________ AFS PLANT ID: _________________ AFS POINT ID: _________________ INSP: _________________

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:__________________

REV 3/96 FAX NUMBER - 317 233-5967 *SEE REVERSE PAGE 1 OF 2
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 SO2, 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:

____________________________________________________________________________

____________________________________________________________________________

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

Source Background and Description

Source Name: Cargill Grain Division
Source Location: 6076 East Railroad Street, Monterey, Indiana 46960
County: Pulaski
Construction Permit No.: CP-131-10081-00001
SIC Code: 5153
Permit Reviewer: Janusz Johnson

The Office of Air Management (OAM) has reviewed an application from Cargill Grain Division relating to the construction and operation of the following facilities:

(a) one (1) existing 1600 bushel per hour column grain dryer fired by natural gas with a maximum heat input rate of 15.0 million British thermal units per hour which was constructed in 1993,

(b) one (1) new totally enclosed paddle conveyor designated C1 and capable of a maximum throughput of 7600 bushels per hour for conveyance of grain across the bin deck,

(c) one (1) new totally enclosed bucket elevator designated as the dry leg L2 for conveyance of dried grain from the column grain dryer at a maximum rate of 6000 bushels per hour, and

(d) one (1) modified totally enclosed bucket elevator, formerly the dry leg for the dryer, to be designated as the wet leg L1 for conveyance of grain to the column grain dryer at a maximum rate of 6000 bushels per hour.

Source Definition

This grain elevator source was acquired by Cargill Grain Division in October 1997 and had, at that time, the following facilities covered by Operation Permit No. 66-09-91-0045 for a grain elevator handling approximately 4,100,000 bushels of grain per year, and Operation Permit No. 66-09-91-0046 for grain drying and milling facilities at the grain elevator drying approximately 1,500,000 bushels of grain per year and milling approximately 300,000 bushels of grain per year:

(a) two (2) inside truck receiving pits with a maximum throughputs of 6,600 bushels per hour, each;

(b) one (1) outside truck receiving pit with a maximum throughput of 6,600 bushels per hour;

(c) twenty-one (21) storage silos, Nos. 1 through 19 and 100 and 200, with a total permanent storage capacity of 2,936,304 bushels

(d) an outside storage ring with a temporary storage capacity totaling 1,000,000 bushels;
(e) ten (10) truck loadouts with maximum throughputs of 13,200 bushels per hour, each;

(f) one (1) rail loadout with a maximum throughput of 20,000 bushels per hour;

(g) eight (8) handling conveyors with maximum throughputs of 10,000 bushels per hour, each;

(h) one (1) rail car unloading conveyor with a maximum throughput of 10,000 bushels per hour; and

(i) two (2) grain dryer conveyors (a wet leg and a dry leg).

**Stack Summary**

The column grain dryer has an open area exhaust and the conveyors are totally enclosed.

**Enforcement Issue**

IDEM is aware that the column grain dryer has been constructed and operated 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.

**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 August 27, 1998, with additional information received on November 12, 1998.

**Emissions Calculations**

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (2 pages).
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):

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Allowable Emissions (tons/year)</th>
<th>Potential Emissions (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter (PM)</td>
<td>193.6</td>
<td>46.3</td>
</tr>
<tr>
<td>Particulate Matter (PM10)</td>
<td>-</td>
<td>11.6</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO₂)</td>
<td>-</td>
<td>negligible</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>-</td>
<td>0.2</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>-</td>
<td>2.3</td>
</tr>
<tr>
<td>Nitrogen Oxides (NOₓ)</td>
<td>-</td>
<td>9.2</td>
</tr>
<tr>
<td>Single Hazardous Air Pollutant (HAP)</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>Combination of HAPs</td>
<td>-</td>
<td>0.0</td>
</tr>
</tbody>
</table>

(a) Allowable emissions are determined from the applicability of rule 326 IAC 6-3. See attached spreadsheets for detailed calculations.

(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) 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) and oxides of nitrogen (NOₓ) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Pulaski County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOₓ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Pulaski County has been classified as attainment or unclassifiable for all other regulated air 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

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

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emissions (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>128</td>
</tr>
<tr>
<td>PM10</td>
<td>40</td>
</tr>
</tbody>
</table>

(a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

(b) These emissions are taken from calculations submitted by Cargill Grain Division on November 12, 1998, and are based on emission factors from AP-42 Fifth Edition Supplement Section 9.9.1-18 dated May, 1998.

Proposed Modification

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM (ton/yr)</th>
<th>PM10 (ton/yr)</th>
<th>SO(_2) (ton/yr)</th>
<th>VOC (ton/yr)</th>
<th>CO (ton/yr)</th>
<th>NO(_x) (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed Modification</td>
<td>46.3</td>
<td>11.6</td>
<td>negligible</td>
<td>0.2</td>
<td>2.3</td>
<td>9.2</td>
</tr>
<tr>
<td>PSD Threshold Level</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
</tbody>
</table>

This modification to an existing minor stationary source is not major because the emission increase 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.

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:

1. at least one of the criteria pollutant is greater than or equal to 100 tons per year,
2. a single hazardous air pollutant (HAP) is greater than or equal to 10 tons per year, or
3. any combination of HAPs is greater than or equal to 25 tons/year.

The source shall comply with 326 IAC 2-7-2 (Part 70) by complying with the limitatons established under 326 IAC 2-10 and 326 IAC 2-11 (Permit By Rule).
Federal Rule Applicability

40 CFR Part 60, Subpart DD (Standards of Performance for Grain Elevators)
This new grain dryer will be located at a grain storage elevator which has a permanent storage capacity of 2,936,304 bushels. Therefore, the NSPS for grain elevators (326 IAC 12 and 40 CFR 60.300) Subpart DD is applicable to the grain dryer and its associated handling operations.

(a) Pursuant to §60.302(c)(2) fugitive emissions from the wet and dry leg grain handling operations associated with the grain dryer shall not exhibit greater than zero percent (0%) opacity.

(b) There are no particulate matter (PM) standards in §60.302 applicable to the column grain dryer because the plate perforation does not exceed 2.4 millimeters in diameter (0.094 inches).

40 CFR Part 63 (NESHAP)
There are no National Emissions Standards for Hazardous Air Pollutants, 40 CFR Part 63, applicable to these facilities.

State Rule Applicability

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 6-3-2 (Particulate Emissions Limitations for Process Operations)
No person shall operate a facility such that particulate matter is emitted in excess of the pound per hour limit calculated as follows according to part (c) of the rule:

\[ E = 4.10 \times P^{0.67} \quad \text{or} \quad E = 55.0 \times P^{0.11} - 40 \]

where: “E” is the emission rate limit in pounds per hour, and “P” is the process throughput in tons per hour.

Based on the capacity of the grain dryer, particulate matter emissions from the facility shall not exceed 44.2 pounds per hour (see attached spreadsheets in Appendix A for detailed calculations). The potential emissions from the dryer are predicted to be 10.6 pounds per hour based on the AP-42 emission factor, therefore, the facility can comply with the rule.
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.
None of these listed air toxics will be emitted from this proposed construction.

Conclusion

The construction of this tower grain dryer and conveyors will be subject to the conditions of the
attached proposed Construction Permit No. CP-131-10081-00001.
Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for New Construction and Operation

Source Name: Cargill Grain Division
Source Location: 6076 East Railroad Street, Monterey, Indiana 46960
County: Pulaski
Construction Permit No.: CP-131-10081-00001
SIC Code: 5153
Permit Reviewer: Janusz Johnson

On December 9, 1998, the Office of Air Management (OAM) had a notice published in the Pulaski County Journal, Winamac, Indiana, stating that Cargill Grain Division had applied for a construction permit to construct and operate a tower grain dryer and conveyors. 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.

On December 28, 1998, Triad Engineering Incorporated (on behalf of Cargill Grain Division) submitted comments on the proposed construction permit. The summary of the comments and corresponding responses is as follows (changes are bolded for emphasis):

Comment 1: Section C.10, Emission Statement - Section C.10 indicates the facility is subject to the annual emissions reporting requirement (326 IAC 2-6). Because of the federally enforceable throughput limitations imposed by the Permit by Rule for Grain Elevators (which the facility has elected to operate under), the facility’s potential to emit is below 100 tons per year (TPY) for all criteria pollutants and therefore, the facility is not subject to the annual emission statement requirement.

Response 1: The OAM agrees that compliance with the Permit by Rule for Grain Elevators will exempt the source from applicability under 326 IAC 2-6 based on the potential to emit (PTE) regulated air pollutants. However, the condition requiring submission of an annual emission statement in the draft permit is Condition C.12. Therefore, condition C.12 has been removed from the permit and all subsequent conditions in Section C have been renumbered as appropriate.

On January 13, 1998, the IDEM, OAM, determined that the following change needed to be made to the proposed permit:

1. Condition C.6 (Opacity Limitations) has been revised to reflect current rule language as follows:

C.6 Opacity Limitations [326 IAC 5-1-2]
Pursuant to 326 IAC 5-1-2 (Visible Emissions Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions opacity shall meet the following, unless otherwise stated in this permit:
(a) visible emissions Opacity shall not exceed an average of 40% opacity in 24 consecutive readings any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) visible emissions Opacity shall not exceed 60% opacity for more than a cumulative total of 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.
Appendix A: Emissions Calculations
Grain Grain Dryer

Company Name: Cargill Grain Division
Adress City IN Zip: 6076 East Railroad Street, Monterey, Indiana 46960
CP: 131-10081
Plt ID: 131-00001
Reviewer: Janusz Johnson
Date: October 21, 1998

Potential emissions from the grain dryer are based on emission factors taken from AP-42 Section 9.9.1-18, Table 9.9.1-1 (Particulate Emission Factors For Grain Elevators).

The grain dryer is rated at 1600 bushels per hour and is fired by natural gas (combustion emissions are calculated separately).

1600 bushels/hour * 60 pounds of grain/bushel * 1 ton/2000 pounds * 0.22 pounds PM/ton processed = 10.6 lb PM/hr

* 24 hours/day = 253.4 lb PM/day

* 365 days/year * 1 ton/2000 pounds = 46.3 tons PM/year

25 % of PM is assumed to be PM10 = 11.6 tons PM10/year

Allowable particulate matter (PM) emissions determined by the applicability of 326 IAC 6-3 (Process Operations: Particulate Emission Limitations) based on a maximum process throughput of 1600 bushels per hour, or 48 tons per hour of grain:

326 IAC 6-3 Calculations

\[
E = 55.0 P^{0.11} - 40
\]

\[
P = 48.0 \text{ tons/hr}
\]

\[
E = 44.2 \text{ lbs/hr}
\]

6-3 allowable PM emissions @ 8760 hrs/yr = 193.6 tons/yr
Appendix A: Emissions Calculations
Natural Gas Combustion Only
Small Industrial Boiler (10 < MM BTU/HR < 100)

Company Name: Cargill Grain Division
Address City IN Zip: 6076 East Railroad Street, Monterey, Indiana 46960
CP: 131-10081
Pit ID: 131-00001
Reviewer: Janusz Johnson
Date: October 21, 1998

<table>
<thead>
<tr>
<th>Heat Input Capacity</th>
<th>Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMBtu/hr</td>
<td>MMCF/yr</td>
</tr>
<tr>
<td>15.0</td>
<td>131.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM</th>
<th>PM10</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>14.0</td>
<td>14.0</td>
<td>0.6</td>
<td>140.0</td>
<td>2.8</td>
<td>35.0</td>
</tr>
</tbody>
</table>

| Potential Emission in tons/yr | 0.9 | 0.9 | 0.0 | 9.2 | 0.2 | 2.3 |

**Emission Factor for NOx:**
- Uncontrolled: 140
- Low NOx Burn: 79
- Flue Recirculation: 30

**Emission Factor for CO:**
- Uncontrolled: 35
- Low NOx Burn: 61
- Flue Recirculation: 37

**Methodology**

- MMBtu = 1,000,000 Btu
- MMCF = 1,000,000 Cubic Feet of Gas
- Potential Throughput (MMCF) = Heat Input Capacity (MMBu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
- Emission Factors are from AP 42, Chapter 1.4, EPA 450/4-90-003, SCC #1-02-006-02
- Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton