

217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

Cargill Dry Corn Ingredients
Attn: Kyle Chilek, Project Engineer
616 South Jefferson Street
Paris, Illinois 61944

Application No.: 02070032

I.D. No.: 045030ABG

Applicant's Designation:

Date Received: July 10, 2002

Subject: Corn Mill Modifications

Date Issued: ---

Location: 616 South Jefferson Street, Paris

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of eleven new baghouses, new flash dryer and a new natural gas water heater as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. This permit allows the Permittee to construct and operate eleven baghouses, a flash dryer and a natural gas water heater, as part of a project to update the dry corn mill.
- 2a. The dry corn mill is subject to 35 IAC 212.321, which provides that no person shall cause or allow the emission of particulate matter (PM) into the atmosphere in any one hour period from any process emission unit or group of similar emission units to exceed the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321 (a)].
- b. The dry corn mill is subject to 35 IAC 212.123(a), which provides that no person shall cause or allow the emission of smoke or other PM, with an opacity greater than 30 percent into the atmosphere from any emission unit.
- c. The dry corn mill is subject to 35 IAC 212.301, which provides that no person shall cause or allow the emissions of fugitive particulate matter from any emission unit, including material handling or storage activity, that is visible by an observer looking general toward the zenith at a point beyond property line of the source.
3. This permit is issued based on no change in throughput capacity of the corn mill plant.
4. The flash dryer and the water heater shall only burn natural gas as fuel only.
- 5a. Emissions of particulate matter (PM/PM₁₀) from the dry corn mill project shall not exceed the limits specify in Attachment A.

- b. i. These conditions in this permit are intended to assure that the increase in emissions from the update dry corn mill is not significant pursuant to the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21. In particular, this permit requires a net decrease in PM₁₀ emission from this project. (See Attachment C).
 - ii. No later than 180 days after start up of the updated corn mill, the Permittee shall permanently remove from service the units listed in Attachment B.
6. At all times, the Permittee shall, maintain and operate emission units in the dry corn mill, including associated control devices, in a manner consistent with good air pollution control practice for minimizing emissions.
- 7a. Within 180 days after initial start up of the updated corn mill, the Permittee shall at its own expense, conduct stack test for PM/PM₁₀ emission and opacity, for the new flash dryer and at least one corn mill degerminator and one elevator cleaning house, in accordance with the applicable test methods and procedures as identified below.

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Flue Gas Weight	USEPA Method 3
Moisture	USEPA Method 4
Particulate Matter (PM/PM ₁₀)	USEPA Method 5
Opacity	USEPA Method 9

- b. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification of the expected date of testing shall be submitted a minimum of 30 days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of 5 working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.
- c. At least 60 days prior to the actual date of testing, a written test plan shall be submitted to the Illinois EPA for review. This plan shall describe the specific procedures for testing, including as a minimum:
 - i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
 - ii. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the emission unit and any control equipment will be determined.

- iii. The specific determinations of emissions and operation, which are intended to be made, including sampling and monitoring locations.
 - iv. The test method(s) that will be used, with the specific analysis method, if the method can be used with different analysis methods.
 - v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.
- d. Copies of the Final Reports(s) for these tests shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized. The Final Report shall include as a minimum:
- i. A summary of results.
 - ii. General information.
 - iii. Description of test method(s), including description of sample points sampling train, analysis equipment, and test schedule.
 - iv. Detailed description of test conditions, including:
 - A. Process information, e.g., equipment feed rate.
 - B. Control equipment information, i.e., equipment condition and operating parameters during testing.
 - v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
- e. Notwithstanding the above, the Illinois EPA may waive the requirements for emission testing upon submittal of a guarantee. Specifically other test results previously done by the Permittee, for similar type of equipments demonstrating emissions of PM/PM₁₀ less than 80 percent of the applicable hourly emission limits in Attachment A.
- 8a. The Permittee shall keep the following operation records for the dry corn mill:
- i. Corn milled based on the daily grind rate, , recorded at least once per day.
 - ii. Throughput (bushels/day monthly average).
- b. The Permittee shall keep an inspection and maintenance log for the baghouse associated with the flash dryer and each other particulate matter control system;
- c. The Permittee shall keep the following records related to emissions:

- i. The maximum emission of PM/PM₁₀ (lb/hour) from each emission unit or group of emission units controlled by a single control device, considering maximum exhaust flow and nominal exhaust loading, with supporting documentation.
 - ii. An estimate of excess PM/PM₁₀ emissions from each incident when a unit did not comply with the limits required in this permit.
 - iii. Annual PM/PM₁₀ and NO_x emission based on the throughput and the applicable emission factors and formulas with supporting calculations.
9. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.
10. If there is an exceedance of the requirements of this permit as determined by the records required by this permit or by other means, the Permittee shall submit a report to the Illinois EPA's within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
11. Two copies of required reports and notifications concerning emissions equipment operation or performance testing shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276
Telephone: 217/782-5811 Facsimile: 217/524-4710

and one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234
Telephone: 618/346-5120 Facsimile: 618/346-5155
12. Upon successful compliance demonstration with the conditions addressed in this permit, the Permittee may operate the units under this Construction Permit until the CAAPP Permit is issued

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The Permittee should update their CAAPP application to include changes at the source due to the corn mill expansion by submitting form 505-CAAPP - "Supplement to CAAPP Application" along with all other appropriate information to accomplish this.

If you have any questions on this, please call Ricardo Ng at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

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cc: Region 3

ATTACHMENT A

Total Project Maximum PM/PM₁₀ Emissions

Emission Source/Stack Designation	Name	Maximum Airflow (cfm)	Maximum* Emission Rate (gr/dsf)	PM/PM ₁₀	
				Maximum Emissions (Lb/Hr)	Maximum Emissions (Ton/Yr)
C036	Corn Mill Degermination I	8,400	7.5 x 10 ⁻³	0.54	2.37
C037	Corn Mill Degermination II	8,400	7.5 x 10 ⁻³	0.54	2.37
C038	Corn Mill Degermination III	8,400	7.5 x 10 ⁻³	0.54	2.37
C039	Corn Mill Degermination IV	8,400	7.5 x 10 ⁻³	0.54	2.37
C040	Corn Mill Degermination V	6,800	7.5 x 10 ⁻³	0.44	1.91
C041	General Aspiration XIV	6,350	7.5 x 10 ⁻³	0.41	1.79
C042	General Aspiration XV	4,250	7.5 x 10 ⁻³	0.27	1.20
C043	New Flash Dryer	24,000	----	1.26	5.53
P009	New Water Heater	----	----	0.0062	0.273
E010	Elevator Cleaning House I	14,500	7.5 x 10 ⁻³	0.93	4.08
E011	Elevator Cleaning House II	14,500	7.5 x 10 ⁻³	0.93	4.08
E012	Elevator Cleaning House III	14,500	7.5 x 10 ⁻³	0.93	4.08
			Totals:	7.40	32.41

* Emission rate based on 99.9% control efficiency of the baghouses.

ATTACHMENT B

PM/PM₁₀ Emissions Units Removal

Emission Source/Stack Designation	Name	Maximum Throughput (Ton/Hr)	2001 Operation Hours	Total PM		PM ₁₀	
				Actual Emissions (Lb/Hr)	Actual Emissions (Ton/Yr)	Actual Emissions (Lb/hr)	Actual Emissions (Ton/Yr)
CO01	Corn Transfer to Production	76.00	6,182	0.46	1.43	0.26	0.80
CO08	Thrustock Cleaner Aspiration	1.00	6,182	0.003	0.01	0.003	0.01
CO09	Thrustock Cooler Aspiration	1.00	6,182	0.02	0.07	0.01	0.02
CO10	Thrustock Aspiration	0.75	6,182	0.06	0.17	0.01	0.04
CO12	Micropulverizer I	2.50	6,182	0.03	0.09	0.03	0.09
CO13	Micropulverizer II	2.50	6,182	0.03	0.09	0.03	0.09
CO14	Micropulverizer III	2.50	6,182	0.03	0.09	0.03	0.09
CO17	Thrustock Dryers	15.00	6,182	0.33	1.02	0.08	0.26
CO18	Thrustock Dryers	30.00	6,182	0.66	2.04	0.17	0.51
CO20	General Aspiration III	1.30	6,182	0.004	0.02	0.004	0.01
CO21	General Aspiration IV	0.20	6,182	0.001	0.002	0.001	0.002
CO22	General Aspiration V	0.20	6,182	0.001	0.002	0.001	0.002
CO23	General Aspiration VI	0.20	6,182	0.001	0.002	0.001	0.002
CO24	General Aspiration VII	0.20	6,182	0.001	0.002	0.001	0.002
CO35	General Aspiration XIII	Unknown	6,182	1.80	5.56	1.80	5.56
CO29	Collets to Grinding	N/A	6,182				
0001/0002	Oil Cake Extruders Suction	4.00	6,182	0.10	0.30	0.05	0.15
0003	Germ Dryers	6.00	6,182	1.08	3.34	1.08	3.34
E003	General Conveyor Suction	65.2	4,121	2.57	7.95	1.43	4.43
E004	Corn Mill Tailcorn System	65.2	4,121	0.07	0.23	0.04	0.13
E005	Corn Cleaning System	75	4,121	5.63	<u>17.39</u>	1.32	<u>4.09</u>
Total 2001 Emissions Eliminated					39.8		19.6

ATTACHMENT C

Change in PM/PM₁₀ Emissions

Table I - Emissions Increases With The Proposed Modification Project

<u>Item of Equipment</u>	<u>Proposed Operation Date</u>	<u>PM/PM₁₀ Emissions Increase (Tons/Year)</u>
Mill Modification - New Units	2003	32.41

Table II - Source-Wide Creditable Contemporaneous Emission Increases

<u>Item of Equipment</u>	<u>Operation Date</u>	<u>PM/PM₁₀ Emissions Increase (Tons/Year)</u>
Boilers P007 and P008 (Permit 00060032)	2000	3.19

Table III - Source-Wide Creditable Contemporaneous Emission Decreases

<u>Item of Equipment</u>	<u>Operation Date</u>	<u>PM/PM₁₀ Emissions Increase (Tons/Year)</u>
Mill Modification - Shutdown Units	2002	- 19.6
Boilers P001 (Permit 00060032)	2000	- 32.04

Table III - Overall Emissions Increase

	<u>(Tons/Year)</u>
Increases Associated With The Proposed Modification	32.41
Contemporaneous Emission Increases	3.19
Contemporaneous Emission Decreases	- 51.64
Total Increases of PM/PM ₁₀ 2002 - 1998	-16.04

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