

217/782-2113

TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT
and
TITLE I PERMIT¹

PERMITTEE

Corn Products International, Inc.
Argo Manufacturing Facility
Attn: Alan L. Jirik
6400 South Archer Avenue
Bedford Park, Illinois 60501-1945

<u>Application No.:</u> 96010009	<u>I.D. No.:</u> 031012ABI
<u>Applicant's Designation:</u>	<u>Date Received:</u> January 1, 1996
<u>Operation of:</u> Corn Wet Milling Plant and Other Operations	
<u>Date Issued:</u> June 2, 2000	<u>Expiration Date:</u> June 2, 2005
<u>Source Location:</u> 6400 South Archer Avenue, Bedford Park, Cook County	
<u>Responsible Official:</u> Esther Geppert, Vice President, U.S. Operations and Technology	

This permit is hereby granted to the above-designated Permittee to OPERATE a corn wet milling plant and other operations at 6400 South Archer Avenue, pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

If you have any questions concerning this, please call Anatoly Belogorsky at 217/782-2113.

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

DES:AB:jar

cc: Illinois EPA, FOS, Region 1
USEPA

¹ This permit may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the CAA and regulations promulgated thereunder, including 40 CFR 52.21 - federal PSD and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within this permit.

² Except as provided in Condition 8.7 of this permit.

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1.0 SOURCE IDENTIFICATION

1.1 Source

Corn Products International, Inc.
Argo Manufacturing Facility
6400 South Archer Avenue
Bedford Park, Illinois 60501-1945
708/563-2400

I.D. No.: 031012ABI
Standard Industrial Classification: 2046, Wet Corn Milling

1.2 Owner/Parent Company

Corn Products International, Inc.
6500 South Archer Avenue
Bedford Park, Illinois 60501-1933

1.3 Operator

Corn Products
6400 Archer Avenue
Bedford Park, Illinois 60501

Alan L. Jirik
708/563-2400

1.4 General Source Description of Source

Corn Products International, Inc. - Argo Manufacturing Facility is located at 6400 Archer Avenue in Bedford Park and is involved in the processing of raw corn and producing a variety of products including sweeteners, starches, edible oils, animal feeds, and other products.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

ACMA	Alternative Compliance Market Account
Act	Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollution Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through E), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27717
ATUs	Allotment Trading Units
BAT	Best Available Technology
Btu	British thermal unit
°C	degrees Celsius
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
cfm	cubic foot per minute
CFR	Code of Federal Regulations
CO	Carbon Monoxide
°F	degrees Fahrenheit
ft	feet
ft ³	cubic foot
g	grams
gal	gallon
gr	grains
HAP	Hazardous Air Pollutant as listed in the Clean Air Act
Hp	Horsepower
hr	hour
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
Illinois EPA	Illinois Environmental Protection Agency
kg	kilogram
l	liter
lb	pound
LEL	Lower Explosive Limit
m	meter
MACT	Maximum Achievable Control Technology
mmBtu/hr	Million Btu per hour
mg	milligrams
mmHg	millimeters of mercury
mmscf	million standard cubic feet
mo	month
MW	Megawatts
NESHAP	National Emission Standards for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NO _x	Nitrogen Oxides including Nitrogen Dioxide
Odor Nuisance	An affirmative finding by the Illinois Pollution Control Board that a specific emission unit is causing an odor nuisance

PM	Particulate Matter
PM ₁₀	Particulate Matter < 10 microns, as measured by applicable test methods specified in the applicable rule
ppm	Parts Per Million
PSD	Prevention of Significant Deterioration
psia	pounds per square inch absolute
RMP	Risk Management Plan
scf	standard cubic feet
scm	standard cubic meters
SIC	Standard Industrial Classification
SO ₂	Sulfur Dioxide
T	Tons
T1	Title I - identifies Title I conditions that have been carried over from an existing permit
T1N	Title I New - identifies Title I conditions that are being established in this permit
T1R	Title I Revised - identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
TOC	Total Organic Compounds
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds
VOL	Volatile Organic Liquid
VOM	Volatile Organic Material, including VOM HAPs listed in the Clean Air Act
wt.	weight
yr	year

3.0 INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

The following activities at the source constitute insignificant activities as specified in 35 IAC 201.210:

3.1.1 Activities determined by the Illinois EPA to be insignificant activities, pursuant to 35 IAC 201.210(a)(1) and 201.211, as follows:

- a. Sewer vents, sump pits, lift stations, grates.
- b. Dry starch HCL storage tank.
- c. Evaporator vacuum condensers.
- d. Waste tank.
- e. Neutralization tanks.
- f. pH adjustment tanks.
- g. Coal storage bunkers.
- h. Building 59 Seal Tank #40
- i. Steam Vent Valve, Powerhouse (Argo 2-068)

3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

All 35 IAC 201.210 (a)(3) activities as listed on form 297-CAAPP, incorporated by reference from the permit application, including any updates to the application.

3.1.3 Activities that are insignificant activities based upon their type or character, pursuant to 35 IAC 201.210(a)(4) through (18), as follows:

- a. Direct combustion units designed and used for comfort heating purposes and fuel combustion emission units as follows: (A) Units with a rated heat input capacity of less than 2.5 mmBtu/hr that fire only natural gas, propane, or liquefied petroleum gas; (B) Units with a rated heat input capacity of less than 1.0 mmBtu/hr that fire only oil or oil in combination with only natural gas, propane, or liquefied petroleum gas; and (C) Units with a rated heat input capacity of less than 200,000 Btu/hr which never burn refuse, or

treated or chemically contaminated wood [35 IAC 201.210(a)(4)].

- b. Equipment used for filling drums, pails or other packaging containers, excluding aerosol cans, with soaps, detergents, surfactants, lubricating oils, waxes, vegetable oils, greases, animal fats, glycerin, sweeteners, corn syrup, aqueous salt solutions, or aqueous caustic solutions [35 IAC 201.210(a)(8)].
- c. Storage tanks of organic liquids with a capacity of less than 10,000 gallons and an annual throughput of less than 100,000 gallons, provided that the tank is not used for the storage of gasoline or any listed hazardous air pollutant pursuant to Section 112(b) of the Clean Air Act [35 IAC 201.210(a)(10)].
- d. Storage tanks of virgin or re-refined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil, or residual fuel oils [35 IAC 201.210(a)(11)].
- e. Printing operations with aggregate organic solvent usage that never exceeds 750 gallons per year from all printing lines at the source, including organic solvent from inks, dilutents, fountain solutions, and cleaning materials [35 IAC 201.210(a)(14)].
- f. Gas turbines and stationary reciprocating internal combustion engines of less than 112 kW (150 horsepower) power output [35 IAC 201.210(a)(15)].
- g. Gas turbines and stationary reciprocating internal combustion engines of between 112 kW and 1,118 kW (150 and 1,500 horsepower) power output that are emergency or standby units [35 IAC 201.210(a)(16)].
- h. Storage tanks of any size containing exclusively soaps, detergents, surfactants, glycerin, waxes, vegetable oils, greases, animal fats, sweeteners, corn syrup, aqueous salt solutions, or aqueous caustic solutions provided an organic solvent has not been mixed with such materials [35 IAC 201.210(a)(17)].
- i. Loading and unloading systems for railcars, tank trucks, or watercraft that handle only the following liquid materials provided an organic solvent has not been mixed with such materials: soaps, detergents, surfactants, lubricating oils, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn

syrup, aqueous salt solutions, or aqueous caustic solutions [35 IAC 201.210(a)(18)].

3.1.4 Activities that are considered insignificant activities pursuant to 35 IAC 201.210(b).

3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.2.2), the Permittee shall comply with the following requirements, as applicable:

3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.

3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.

3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.3 Addition of Insignificant Activities

3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).

3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.

3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Equipment	Description
Group 1	Railcar Maintenance Shop	I. Coating Lines II. Sandblasting Machines
Group 2	Dry Starch Unit	Drying, Packaging and Loading Operations of Starch Products.
Group 3	Dextrose Unit	Liquid Corn Sweeteners are Crystallized and the Crystals are Separated, Dried, and Packaged for Shipment or Further Processing in Other Crystalline Sugar Products.
Group 4	Germ Processing Facility	Corn Germ Preparation Followed by Corn Oil Extraction from the Germ.
Group 5	Sugar Refinery	Operations and Equipment for Syrups Manufacturing.
Group 6	Wet Milling and Co-Products Operations	Corn Wet Milling and Subsequent Separation into the Primary Corn Components of Germ, Fiber, Gluten, and Starch, Followed by Dewatering and Drying before Further Processing of the Separated Components in Other Areas of the Plant.
Group 7	Vegetable Oil Refinery	Equipment to Refine, Bleach, Winterize, and Deodorize Corn Oil from Germ.
Group 8	Consumer Foods Packaging (Best Foods)	Processing and Packaging of Consumer Food Products.
Group 9	Utilities	Boilers and Turbines Used for Production of Electricity and Steam for Manufacturing Needs.
Group 10	Fly Ash Processing Units	Fly Ash (By-Product of Coal Burning) is Transferred from Hoppers to the Primary Collector Where it Drops Through Air Locks into the Fly Ash Storage Silo.
Group 11	Fugitive Emissions	Emissions of Regulated Air Contaminants, as Referenced in the Permit Application.

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of VOM, NO_x, SO₂, PM₁₀, CO, and HAPs emissions.

5.2 Applicable Regulations

5.2.1 Specific emission units at this source are subject to particular regulations as set forth in Section 7 (Unit-Specific Conditions) of this permit.

5.2.2 In addition, emission units at this source are subject to the following regulations of general applicability:

- a. No person shall cause or allow the emissions of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.
- b. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123 (b) and 35 IAC 212.124. In reference to 212.124, the 8.6.2 requirement to submit a test plan at least 60 days in advance is waived because 212.124 requires that any testing be done within 60 days and does not allow for 8.6.2 to be followed.
- c. PM₁₀ emissions from this location are regulated by 35 IAC Part 212 Subpart N: "Food Manufacturing". Specifically, the following emission limits are established in 35 IAC 212.362(b) for specific emission units operated by the Permittee:

No person shall cause or allow the emission of PM₁₀, other than that of fugitive particulate matter, into the atmosphere to exceed the following limits during any one hour period:

- i. 22.9 mg/scm (0.01 gr/scf) for dextrose dryers, dextrose melt tank systems, bulk dextrose

loading systems, house dry dextrose dust systems, dextrose bagging machine dust systems, dextrose expansion dryer/cooler and packaging systems and 2,034 dextrose dryer/cooler dust collecting systems;

- ii. 34.3 mg/scm (0.015 gr/scf) for feed dryers, gluten dryers, germ dryers, and heat recovery scrubbers;
 - iii. 68.7 mg/scm (0.03 gr/scf) for germ cake transport system, spent flake transport/cooling systems, bleaching clay systems, dust pickup bin systems in Building 26, and pellet cooler systems; and
 - iv. 45.8 mg/scm (0.02 gr/scf) for germ transport systems, starch dust collection systems, dicalite systems, starch processing/transport systems, starch dryers, starch transport systems, calcium carbonate storage systems, starch loading systems, corn unloading systems, germ transfer towers, dextrose transport systems, soda ash unloading systems, corn silo systems, filter aid systems, spent flake storage systems, corn cleaning transport systems, feed transport cooling systems, gluten cooling systems, gluten transport systems, feed dust systems, gluten dust systems, pellet dust systems, spent flake transport systems, rail car maintenance system building, and dextrose expansion milling and storage systems.
- d. i. For all process emission units other than described in Section 5.2.2 (c)(i), (ii), (iii), and (iv) emissions of PM₁₀ shall not exceed limit of 68.7 mg/scm (0.03 gr/scf) during any one hour period [35 IAC 212.324 (b)].
- ii. This mass emission limit shall not apply to those emission units with no visible emissions other than fugitive particulate matter. However, if a stack test is performed, this is not a defense finding of a violation of the mass emission limits contained in 35 IAC 212.324(b) [35 IAC 212.324(d)].
- e. All process emission units (except Germ Processing Facility) operated on this site are subject to either

of the following limits established by 35 IAC Part 218 Subpart G "Use of Organic Material":

i. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission unit if odor nuisance exists and/or applied organic materials are photochemically reactive [35 IAC 218.301].

ii. Emissions of organic material in excess of those established by 35 IAC 218.301 are allowable if such emissions are controlled by one of the following methods:

Incineration device or vapor recovery system which reduce uncontrolled organic material emissions by at least 85 percent [35 IAC 218.302].

5.2.3. The Permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

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.

5.2.4. As of the date this permit is issued, the operations of the Permittee located at 6400 South Archer Avenue are not subject to 40 CFR 68. Should this stationary source, as defined in 40 CFR Section 68.3, become subject to the Accidental Release Prevention regulations in Part 68, then the owner or operator shall submit a Risk Management Plan (RMP) by the date specified in Section 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 CFR Part 70 or 71.

5.2.5. As of the date this permit is issued, the operations of the Permittee located at 6400 South Archer Avenue are not subject to 40 CFR 63. Should this stationary source, as defined in 40 CFR Part 63, become subject to 40 CFR Part 63, then the owner or operator shall comply with the applicable requirements of 40 CFR Part 63 by the date(s) specified in the NESHAP and shall certify compliance with the applicable requirements of 40 CFR Part 63 as part of the annual compliance certification as required by 40 CFR Part 70 or 71.

5.2.6 PM₁₀ Contingency Measure Plan

This stationary source, as defined in 35 IAC 212.700, is required to prepare and submit a contingency measure plan reflecting the PM₁₀ emission reductions as set forth in 35 IAC 212.703. Such plan is incorporated by reference into this permit and shall be implemented in accordance with 35 IAC 212.704. The source shall comply with the applicable requirements of 35 IAC Part 212, Subpart U, incorporated herein by reference.

5.3 Non-Applicability of Regulations of Concern

- a. The operations of this facility are exempted from the control requirements of 35 IAC Part 218, Subpart TT because this facility is involved in vegetable oil extraction and processing, and pursuant to 35 IAC 218.980(f) such operations are exempted from applicability of Subpart TT.
- b. The operation of the Permittee's cogeneration plant is exempted from applicability of 40 CFR Part 72, Subpart F "Federal Acid Rain Permit Issuance Procedures" based on the following provision of 40 CFR 72.6(b)(4)(i) and (ii):
 - i. For a unit that commenced construction on or prior to November 15, 1990, was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 MWe-hours actual electric output on an annual basis to any utility power distribution system for sale (on a gross basis).
 - ii. For units which commenced construction after November 15, 1990, supplies equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 MWe-hours actual electric output on an annual basis to any utility power distribution system for sale (on a gross basis).

5.4 Source-Wide Operational and Production Limits and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9, the Permittee shall fulfill the following source-wide operational and production limitations and/or work practice requirements pursuant to 35 IAC 212.324(f):

For any process emission unit described in Condition 5.2.2 (c), the owner or operator shall maintain and repair air pollution control equipment in a manner that assures that applicable emission limits and standards shall be met at all times. Proper maintenance shall include the following minimum requirements:

- a. Visual inspection of air pollution control equipment;
- b. Maintenance of an adequate inventory of spare parts; and
- c. Expedient repairs, unless the emission unit is shutdown.

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source are not established for fee purposes because the Permittee pays maximum annual fee of \$100,000 for emissions from this site [Act 415 ILCS 5/1et seq., Title X, Section 39.5, Subsection 18(a)(ii)(A)].

5.5.2 Emissions of Hazardous Air Pollutants

Source-wide emissions for HAPs as listed in Section 112(b) of the CAA are not set. This source is considered to be a major source of HAPs.

5.5.3 Other Source-Wide Emission Limitations

Other source-wide emission limitations are not set for this source pursuant to either the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, Illinois EPA rules for Major Stationary Sources Construction and Modification, 35 IAC Part 203, or Section 502(b)(10) of the CAA. However, there may be unit specific emission limitations set forth in Section 7 of this permit pursuant to these rules.

5.6 General Recordkeeping Requirements

5.6.1 Emission records

The Permittee shall maintain records of the following items for the source, pursuant to Section 39.5(7)(b) of the Act:

- a. Total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions) of this permit.
- b. The Permittee shall maintain the following records for maintenance and repair as required by 35 IAC 212.324(g):
 - i. Written or electronic records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment;
 - ii. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state what corrective actions were taken and what repairs were made;
 - iii. A written or electronic record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated;
 - iv. Copies of all records required by this Condition and 35 IAC 212.324(g) shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA; and
 - v. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when the air pollution control equipment was not in operation or was not operating

properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made.

5.6.2 Retention and Availability of Records

- a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), the most recent two years shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Records more than two years old may be maintained at a nearby location, provided that they can be retrieved within 24 hours. The Permittee may delete any trade-secret confidential information that is co-located on the pages requested by Illinois EPA or USEPA prior to copying.
- b. The Permittee shall retrieve and print, on paper during normal source office hours, any records required by this permit retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection. The Permittee may delete any non-related trade-secret confidential information that is co-located on the pages requested by Illinois EPA or USEPA prior to copying.
- c. For those records or logs that are of an operational nature such as scrubbant flow, pressure drop or temperature, capture of at least 95% of the potential data shall constitute an acceptable record. This approach is consistent with other U.S. EPA programs such as the NSPS.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Bureau of Air, Compliance Section of noncompliance with the permit requirements as follows in Section 7 of this permit, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

5.7.2 Annual Emissions Report

The annual emissions report required pursuant to Condition 9.7 shall contain emissions information for the previous calendar year.

5.8 General Operational Flexibility/Anticipated Operating Scenarios

The Permittee is granted the following operational flexibility, provided records are kept of the nature, date and emissions results and provided the facility net emissions do not exceed those established in Sections 5 and 7 of this permit:

- a. The Permittee may substitute, change or add ingredients to any of its manufacturing processes.
- b. The Permittee may add equipment or modify its operation to manufacture under a different SIC code than listed in Section 1, provided that other relevant requirements of this permit are met.
- c. The Permittee may move, modify or replace any equipment considered to be part of its process. The Permittee may move, modify or replace any pollution control device provided the emissions from the new or modified control device are the same or less than prior to such modification/replacement and still in compliance with applicable emission limits listed in Section 7.
- d. Except for Utilities, which are addressed in Section 7.9 of this permit, in the event of a malfunction or breakdown of air pollution control device(s), the Permittee is authorized to continue operation of equipment vented to such air pollution control device(s) in violation of applicable emission limitation(s), as necessary to prevent risk of injury to personnel or severe damage to equipment, and/or so long as necessary to conduct an orderly shutdown of such equipment. The Permittee shall maintain records of continued operation of equipment vented to air pollution control devices during malfunctions and breakdowns, and shall notify the Illinois EPA, Bureau of Air, Compliance Section of noncompliance with applicable emission limitation(s) within 30 days of any such event.

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating Allowable Emissions

None

5.10 Construction Permits Revisions

The conditions of construction permits referenced in Section 7 of this CAAPP have been revised to reflect the following:

- a. Pursuant to the USEPA memorandum from October 16, 1995, emissions of PM_{10} but not TSP (total suspended particles) be considered for Title V applicability. Therefore, all construction permits previously issued to Corn Products International, Inc and its predecessors revised to reflect the change of the regulated air pollutant from TSP to PM_{10} . This change shall only affect the name of the regulated air contaminant established by those permits.
- b. The emission limitations established in Section 7 of this CAAPP reflect the grouping of emission units and emissions from appropriate construction permits.
- c. Adherence to and compliance with the requirements of this Title V permit shall be deemed to satisfy the requirements of all previous state air permits issued by IEPA to Permittee.

5.11 Test Plan Requirements

In general, the requirement in Section 8.6.2 of this permit to submit a written test plan 60 days prior to testing is waived whenever an applicable regulation requires testing within 90 days or less of an event. In these cases, the Illinois EPA may require the Permittee to submit a written test plan on an alternate schedule and will notify the applicant, in writing, if test plan submittal under an alternate schedule is required.

6.0 EMISSION REDUCTION MARKET SYSTEM (ERMS)

6.1 Description of ERMS

The ERMS is a "cap and trade" market system for major stationary sources located in the Chicago ozone nonattainment area. It is designed to reduce VOM emissions from stationary sources to contribute to further reasonable progress toward attainment, as required by Section 182(c) of the Clean Air Act.

The ERMS addresses VOM emissions during a seasonal allotment period from May 1 through September 30. Under the ERMS, participating sources must hold "allotment trading units" (ATUs) for their actual seasonal VOM emissions. Each year participating sources are issued ATUs based on allotments set during initial issuance of the sources' CAAPP permit. These allotments are established from historical VOM emissions or "baseline emissions" lowered to provide the emission reduction from stationary sources required for further progress.

By December 31 of each year, the end of the reconciliation period following the seasonal allotment period, each source should have sufficient ATUs in its account to cover its actual VOM emissions during the preceding season. An account's balance as of December 31 will include any valid ATU transfer agreements entered into as of December 31 of the given year, provided such agreements are promptly submitted to the Illinois EPA for entry into the account database. The Illinois EPA will then retire ATUs in sources' accounts in amounts equivalent to their seasonal emissions. When a source does not appear to have sufficient ATUs in its account, the Illinois EPA will issue a notice to the source to begin the process for Emissions Excursion Compensation.

In addition to receiving ATUs pursuant to their allotments, participating sources may also obtain ATUs from the market, including ATUs bought from other participating sources and general participants in the ERMS that hold ATUs (35 IAC 205.630) and ATUs issued by the Illinois EPA as a consequence of VOM emission reductions from an Emission Reduction Generator or an Intersector Transaction (35 IAC 205.500 and 205.510). During the reconciliation period, sources may also buy ATUs from a secondary reserve of ATUs managed by the Illinois EPA, the Alternative Compliance Market Account (35 IAC 205.710). A source may also transfer or sell the ATUs that it holds to other sources or participants (35 IAC 205.630).

6.2 Applicability

This source is considered a "participating source" for purposes of the ERMS, 35 IAC Part 205.

6.3 Obligation to Hold Allotment Trading Units (ATUs)

- a. Pursuant to 35 IAC 205.150(c)(1) and 205.720, and as further addressed by Condition 6.8, as of December 31 of each year, this source shall hold ATUs in its account in an amount not less than its VOM emissions during the preceding seasonal allotment period (May 1 - September 30) not including VOM emissions from the following, or the source shall be subject to "emissions excursion compensation," as described in Condition 6.4.
 - i. VOM emissions from insignificant units and activities as identified in Section 3 of this permit, in accordance with 35 IAC 205.220;
 - ii. Excess VOM emissions associated with startup, malfunction or breakdown of an emission unit as authorized elsewhere in this permit, in accordance with 35 IAC 205.225;
 - iii. Excess VOM emissions to the extent allowed by a Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e)(3);
 - iv. Excess VOM emissions that are a consequence of an emergency as approved by the Illinois EPA, pursuant to 35 IAC 205.750; and
 - v. VOM emissions from certain new and modified emission units as addressed by Section 6.7(b), if applicable, in accordance with 35 IAC 205.320(f).
- b. Notwithstanding the above condition, in accordance with 35 IAC 205.150(c)(2), if a source commences operation of a major modification pursuant to 35 IAC Part 203, the source shall hold ATUs in an amount not less than 1.3 times its VOM emissions attributable to such major modification during the seasonal allotment period, determined in accordance with the construction permit for such major modification or applicable provisions in Section 7.0 of this permit.

6.4 Market Transaction

- a. The source shall apply to the Illinois EPA, and obtain a Transaction Account prior to conducting any market transactions, pursuant to 35 IAC 205.610(a).

- b. The Permittee shall promptly submit to the Illinois EPA any revisions to the information submitted for its Transaction Account, pursuant to 35 IAC 205.610(b).
- c. The source shall have at least one account officer designated for its Transaction Account, pursuant to 35 IAC 205.620(a).
- d. Any transfer of ATUs to or from the source from another source or general participant must be authorized by a qualified Account Officer designated by the source and approved by the Illinois EPA in accordance with 35 IAC 205.620 and the transfer must be submitted to the Illinois EPA for entry into the Transaction Account database.

6.5 Emission Excursion Compensation

Pursuant to 35 IAC 205.720, if the source fails to hold ATUs in accordance with Condition 6.3, it shall provide emissions excursion compensation to the Illinois EPA in accordance with the following:

- a. Upon receipt of an Excursion Compensation Notice issued by the Illinois EPA, the source shall purchase ATUs from the ACMA in the amount specified by notice, as follows:
 - i. The purchase of ATUs shall be in an amount equivalent to 1.2 times the emissions excursion; or
 - ii. If the source had an emissions excursion for the seasonal allotment period immediately before the period for the present emission excursion, the source shall purchase ATUs in an amount equivalent to 1.5 times the emissions excursion.
- b. If requested in accordance with paragraph (c) below or in the event that the ACMA balance is not adequate to cover the total emissions excursion amount, the Illinois EPA will deduct ATUs equivalent to the specified amount or any remaining portion thereof from the ATUs to be issued to the source for the next seasonal allotment period.
- c. Pursuant to 35 IAC 205.720(c), within 15 days of receipt of an Excursion Compensation Notice, the owner or operator may request that ATUs equivalent to the amount specified be deducted from the source's next seasonal allotment by the Illinois EPA, rather than purchased from the ACMA.

6.6 Quantification of Seasonal VOM Emissions

- a. The methods and procedures specified in Section 5 and 7 of this permit for determining VOM emissions and compliance with VOM emission limitations shall be used for determining seasonal VOM emissions for purposes of the ERMS, with the following exceptions [35 IAC 205.315(b)]:

No exceptions

- b. The Permittee shall report emergency conditions at the source to the Illinois EPA in accordance with 35 IAC 205.750, if the Permittee intends to deduct VOM emissions in excess of the technology-based emission rates normally achieved that are attributable to the emergency from the source's seasonal VOM emissions for purposes of the ERMS. These reports shall include the information specified by 35 IAC 205.750(a), and shall be submitted in accordance with the following:
 - i. An initial emergency condition report within two days of the time when such excess emissions occurred due to the emergency; and
 - ii. A final emergency condition report, if needed to supplement the initial report, within 10 days after the conclusion of the emergency.

6.7 Annual Account Reporting

- a. For each year in which the source is operational, the Permittee shall submit, as a component of its Annual Emission Report, seasonal VOM emission information to the Illinois EPA for the seasonal allotment period. This report shall include the following information [35 IAC 205.300]:
 - i. Actual seasonal emissions of VOM from the source;
 - ii. A description of the methods and practices used to determine VOM emissions, as required by this permit, including any supporting documentation and calculations;
 - iii. A detailed description of any monitoring methods that differ from the methods specified in this permit, as provided in Section 205.337 of this Subpart;
 - iv. If a source has experienced an emergency, as provided in 35 IAC 205.750, the report shall reference the

associated emergency conditions report that has been approved by the Illinois EPA;

- v. If a source's baseline emissions have been adjusted due to a variance, consent order or CAAPP permit compliance schedule, as provided for in 35 IAC 205.320(e)(3), the report shall provide documentation quantifying the excess VOM emissions during the season that were allowed by the Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e)(3); and
 - vi. If a source is operating a new or modified emission unit for which three years of operational data are not yet available, as specified in 35 IAC 205.320(f), the report shall specify seasonal VOM emissions attributable to the new emission unit or the modification of the emission unit.
- b. This report shall be submitted by November 30 of each year, for the preceding seasonal allotment period.

6.8 Allotment of ATUs to the Source

- a.
 - i. The allotment of ATUs to this source is 4,887 ATUs per seasonal allotment period.
 - ii. This allotment of ATUs reflects the Illinois EPA's determination that the source's baseline emissions were 554.2503 tons.
 - iii. The source's allotment reflects 88% of the baseline emissions (12% reduction) except for the VOM emissions from specific emission unit excluded from such reduction pursuant to 35 IAC 205.405 including units complying with MACT or using BAT, as identified in Section 7 of this permit.
 - iv. ATUs will be issued to the source's Transaction Account by the Illinois EPA annually. These ATUs will be valid for the seasonal allotment period following issuance and, if not retired in this season, the next seasonal allotment period.
 - v. Condition 6.3(a) becomes effective beginning in the seasonal allotment period during the initial issuance of ATUs by the Illinois EPA into the Transaction Account for the source.

b. Contingent Allotments for New or Modified Emission Units.

The source was issued a construction permit prior to January 1, 1998 for the following new or modified emission units for which three years of operational data is not yet available:

Although the source was issued construction permits prior to January 1, 1998 for emission units without three years of operational data, the baseline will not be adjusted as the emission units are either insignificant for VOM or their emissions were accounted for by netting during permitting.

c. Notwithstanding the above, part or all of the above ATUs will not be issued to the source in circumstances as set forth in 35 IAC Part 205, including:

- i. Transfer of ATUs by the source to another participant or the ACMA, in accordance with 35 IAC 205.630;
- ii. Deduction of ATUs from the allotment as a consequence of emission excursion compensation, in accordance with 35 IAC 205.720; and
- iii. Transfer of ATUs from the allotment to the ACMA, as a consequence of shutdown of the source, in accordance with 35 IAC 205.410.

6.9 Recordkeeping for ERMS

The Permittee shall maintain copies of the following documents as its Compliance Master File for purposes of ERMS [35 IAC 205.700(a)]:

- a. Seasonal component of the Annual Emission Report;
- b. Information on actual VOM emissions, as specified in detail in Sections 5 and 7 of this permit and Condition 6.6(a); and
- c. Any transfer agreements for the purchase or sale of ATUs and other documentation associated with the transfer of ATUs.

6.10 Federal Enforceability

Section 6 becomes federally enforceable upon approval of the ERMS by USEPA as part of Illinois' State Implementation Plan.

6.11 Exclusion from Further Reduction

- a. VOM emissions from the following emission units, if satisfying subsection (a)(1), (a)(2), or (a)(3) prior to May 1, 1999, shall be excluded from the VOM emissions reduction requirements specified in 35 IAC 205.400(c) and (e) as long as such emission units continue to satisfy subsection (a)(1), (a)(2), or (a)(3) [35 IAC 205.405(a)]:
- i. Emission units that comply with any NESHAP or MACT standard promulgated pursuant to the CAA;
 - ii. Direct combustion emission units designed and used for comfort heating purposes, fuel combustion emission units and internal combustion engines; and
 - iii. An emission unit for which a LAER demonstration has been approved by the Agency on or after November 15, 1990.

The source has demonstrated in their ERMS application and the Illinois EPA has determined that the following emission units qualifies for exclusion from further reductions because they meet the criteria as indicated above [35 IAC 205.400(a) and (c)]:

Boilers, heaters, and Cogeneration Engines

- b. VOM emissions from the emission units using BAT for controlling VOM emissions, prior to May 1, 1999, shall not be subject to the VOM emissions reduction requirements specified in 35 IAC 205.400(c) or (e) as long as such emission unit continues to use such BAT [35 IAC 205.405(b)].

The source has demonstrated in their ERMS application and the Illinois EPA has determined that the following emission units qualifies from further reductions because these emission units use BAT for controlling VOM emissions as indicated above [35 IAC 205.400(b) and (c)]:

None

7.0 UNIT SPECIFIC CONDITIONS

7.1 Group 1: Railcar Maintenance Shop

I. Coating Lines

7.1.I-1 Description

Coating lines consume extreme performance interior and exterior coatings applied for touch-up and recoating railcars during scheduled maintenance.

7.1.I-2 List of Emission Units and Pollution Control Equipment

Emission Unit	Equipment	Description	Emission Control Equipment
Group 1	Coating Lines	Coating Line A (Railcar Interiors)	None
		Coating Line B (Railcar Exteriors)	None
		Date of Construction: Prior to 1972	

7.1.I-3 Applicability Provisions and Applicable Regulations

- a. The "affected coating line" for the purpose of these unit specific conditions is a coating line which is used to apply an extreme performance coatings on railroad cars.
- b. Each affected coating line at the source is subject to the limitation of 35 IAC 218.204 (j)(2)(A) for extreme performance air-dried coating. This limitation is described further in Condition 7.1.I-6.
- c. PM₁₀ emissions from this location are regulated by 35 IAC Part 212 Subpart N: "Food Manufacturing". Specifically, the following emission limits are established in 35 IAC 212.362(b)(4) for specific emission units operated by the Permittee in the Village of Bedford Park west of Archer Avenue:

No person shall cause or allow the emission of PM₁₀, other than that of fugitive particulate matter, into the atmosphere to exceed the following limits during any one-hour period:

45.8 mg/scm (0.02 gr/scf) for rail car
maintenance system building

- d. Each affected coating line is subject to 35 IAC 212.322(b)(1), which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced prior to April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (See also Section 10.1, Attachment 1) [35 IAC 212.322(a)].

7.1.I-4 Non-Applicability of Regulations of Concern

The affected coating line is not subject to 35 IAC Subpart G: Use of Organic Material (Section 218.301 or 218.302), pursuant to 35 IAC 218.209, Exemption From General Rule on Use of Organic Material, which excludes affected coating line from this requirement because of applicability to Section 218.204.

7.1.I-5 Operational and Production Limits and Work Practices

For any process emission unit located in the PM₁₀ non-attainment areas designated in 35 IAC 212.324(a), the Permittee shall maintain and repair all air pollution control equipment in a manner that assures that the emission limits and standards in 35 IAC 212.324 shall be met at all times. Proper maintenance shall include the following minimum requirements, pursuant to 35 IAC 212.324(f):

- a. Visual inspection of air pollution control equipment;
- b. Maintenance of an adequate inventory of spare parts; and
- c. Expeditious repairs, unless the emission unit is shutdown.

7.1.I-6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5.1, each affected coating line is subject to the following:

- a. No owner or operator of the affected coating line shall apply at any time any coating in which the VOM content exceeds the following emission limitations for the extreme performance air dried coatings as applied to Miscellaneous Metal Parts and Products, as required by 35 IAC 218.204(j)(2)(A). The following emission limitation is expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at the coating line:

<u>kg/l</u>	<u>lb/gal</u>
0.42	3.5

As allowed by 35 IAC 218.208(c), the above limitation does not apply to touch-up and repair coatings provided that the source-wide volume of such coatings used does not exceed 1 quart per eight-hour period of 55 gal/yr for any rolling twelve-month period.

- b. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composites.

7.1.I-7 Testing Requirements

Testing for VOM content of coatings and other materials shall be performed as follows [35 IAC 218.105(a), 218.211(a), and Section 39.5(7)(b) of the Act]:

Upon reasonable request by the Illinois EPA or USEPA, the VOM content of specific coatings and cleaning solvents used on the affected coating line shall be determined according to USEPA Reference Method 24 of 40 CFR 60 Appendix A and the procedures of 35 IAC 218.105(a) and 218.211(a). Test plan submittal as called for in 8.6.2 is not required for this testing.

- a. The VOM content in units of lb/gal or wt. % of representative coatings "as applied" on the affected coating line shall be determined according to USEPA Reference Method 24 of 40 CFR

60 Appendix A and the procedures of 35 IAC 218.105(a); and

- b. This testing may be performed by the supplier of a material provided that the supplier provides appropriate documentation for such testing to the Permittee and the Permittee's records pursuant to Condition 7.1.I-9 directly reflect the application of such material and separately account for any additions of solvent.
- c. The percent concentration of solvent in the VOM-containing waste from the affected coating line shall be determined in accordance with USEPA Test Methods for Evaluation of Solid Waste, Physical/Chemical Methods (SW-846), Test Methods 8260.

7.1.I-8 Monitoring Requirements

None

7.1.I-9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for the affected coating line to demonstrate compliance with conditions of this permit, pursuant to Section 39.5(7)(b) of the Act:

- a. The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM), as applied each month on the affected coating line;
- b. The weight of VOM per volume of each cleanup solvent, in units lb/gallon, as applied each month on the affected coating line;
- c. The name and identification number of each coating as applied on each coating line;
- d. Density of each applied coating and cleanup solvent, in units lb/gal;
- e. The VOM content of each coating applied, % by wt., or lb/gal;
- f. The usage of each coating and clean-up solvent, in units of gallons/month and gallons/year;

- g. The amount of sludge generated and solvent reclaimed on the affected line in units gallons/month;
- h. The average density lb/gal and wt. % of VOM in generated sludge and solvent reclaimed, but only if the Permittee is claiming and taking credit for solvent recovery in generated sludge;
- i. Records of the testing of VOM and HAP content of each coating and cleaning solvent as tested by the Permittee, pursuant to the conditions of this section, which include the following:
 - i. Identification of material tested;
 - ii. Results of analysis;
 - iii. Documentation of analysis methodology; and
 - iv. Person performing analysis.
- j. Records of touch-up and repair coating usage including the following:
 - i. Collect and record the name, identification number, and volume used of each touch-up and repair coating, as applied on each coating line, per eight-hour period and per month;
 - ii. Perform calculations on a daily basis, and maintain at the source records of such calculations of the combined volume of touch-up and repair coatings used source-wide for each eight-hour period;
 - iii. Perform calculations on a monthly basis, and maintain at the source records of such calculations of the combined volume of touch-up and repair coatings used source-wide for the month and the rolling twelve-month period;
 - iv. Prepare and maintain at the source an annual summary of the information required to be compiled pursuant to subsections (i) and (ii) above on or before January 31 of the following year;
 - v. Maintain at the source for a minimum period of three years all records required to be

kept under this subsection and make such records available to the Illinois EPA upon request;

- k. Total VOM emissions in tons/month and tons/year from the effected coating line which are calculated and based on the compliance procedures from Condition 7.1.I-12.

7.1.I-10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with applicable emission limitations as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

Application of coating(s) with the VOM content in excess of the limits specified in Condition 7.1.I-6(a).

The Permittee shall also notify the Illinois EPA in writing if the use of touch-up and repair coatings at the source ever exceed a volume of 0.95 l (1 quart) per eight-hour period or exceeds 209 l/yr (55 gal/yr) for any rolling twelve month period within 30 days after any such exceedance. Such notification shall include a copy of any records of such exceedance.

7.1.I-11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected coating line without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Usage of coatings, thinners, or cleaning solvents at this source with various VOM contents provided that the materials are tested in accordance with Condition 7.1.I.7 and the affected coating line remains in compliance with Condition 7.1.I-6.

7.1.I-12 Compliance Procedures

- a. For VOM emissions calculation of the affected coating lines the following equation shall be used:

- i. Emissions from Coating Operation (EI) =
[Actual Coating Usage (gal/mo) x Coating
Density (lb/gal) x VOM Content of the Coating
(wt. %)] - [VOM Containing Waste (gal/mo) x
Waste Density (lb/gal) x VOM Content in Waste
(wt. %)];

The following alternate procedure may also be
used:

$$\text{EI} = [(\text{lb VOM/gal coating}^* \times \text{gallons coating used}) + (\text{lb VOM/gal solvent}^* \times \text{gallons solvent thinner added})] - [\text{VOM Containing Waste (gal)} \times \text{Waste Density (lb/gal)} \times \text{VOM Content in Waste (wt. \%)}] = \text{lb VOM emissions.} \\ [* = \text{"as-supplied"}]$$

- ii. Emissions from Cleanup Operation (EII) =
(Actual Clean-up Solvent Usage (gal/mo) x
Solvent Density (lb/gal) x VOM Content of the
Clean-up Solvent (wt. %) - [VOM Containing
Waste (gal/mo) x Waste Density (lb/gal) x VOM
Content in Waste (wt. %)]); and

iii. Total VOM Emissions = EI + EII

- b. Compliance of the affected coating line with VOM
emission limitations in Condition 7.1.I-6(a) shall
be based on the recordkeeping requirements in
Condition 7.1.I-9 and by the use of either testing
or by use of the formula listed below:

$$\text{VOM Coating Content} = V \times D / [1 - W \times D]$$

Where:

V = Percent VOM in the coating (%)

D = Overall coating density (lb/gal)

$$W = (w_i / d_i)$$

Where:

w_i = Percent exempt compound i in the coating,

d_i = Overall density of exempt compound i, lb/gal

and the summation is applied over water and all
exempt compounds i in the coating.

- c. Compliance with the PM_{10} limitations in this section is assured and achieved by the proper operation and maintenance of the coating lines, as required by this section, and the work-practices inherent in operation of the affected coating lines.

II. Sandblasting Machines

7.1.II-1 Description

The sandblasting machines utilized for surface preparation prior to the railcar coating applied.

7.1.II-2 List of Emission Units and Emission Control Equipment

Emission Unit	Equipment	Description	Emission Control Equipment
Group 1.II	Sandblasting Machines	Fixed Sandblasting Machine	Dust Collector
		Portable Sandblasting Machine	Dust Collector
		Date of Construction: 1964 and 1970	

7.1.II-3 Applicability Provisions and Applicable Regulations

- a. An "affected sandblasting machine" for the purpose of these unit specific conditions is a blasting operation for removal of residues prior to a coating application.
- b. PM₁₀ emissions from this location are regulated by 35 IAC Part 212 Subpart N: "Food Manufacturing". Specifically, the following emission limits are established in 35 IAC 212.362(b)(4) for specific emission units operated by the Permittee in the Village of Bedford Park west of Archer Avenue:

No person shall cause or allow the emission of PM₁₀, other than that of fugitive particulate matter, into the atmosphere to exceed the following limits during any one hour period:

45.8 mg/scm (0.02 gr/scf) for rail car maintenance system building

7.1.II-4 Non-Applicability of Regulations of Concern

The affected sandblasting machine is not subject to 35 IAC 212.322, Particulate Matter Emissions from Existing Process Emission Sources, pursuant to 35 IAC 212.681, Grinding, Woodworking, Sandblasting and Shotblasting.

7.1.II-5 Operational and Production Limits and Work Practices

For any process emission unit located in the PM₁₀ non-attainment areas designated in 35 IAC 212.324(a), the Permittee shall maintain and repair all air pollution control equipment in a manner that assures that the emission limits and standards in 35 IAC 212.324 shall be met at all times. Proper maintenance shall include the following minimum requirements, pursuant to 35 IAC 212.324(f):

- a. Visual inspection of air pollution control equipment;
- b. Maintenance of an adequate inventory of spare parts; and
- c. Expeditious repairs, unless the emission unit is shutdown.

7.1.II-6 Emission Limitations

None

7.1.II-7 Testing Requirements

Upon reasonable request by the Illinois EPA, the particulate matter concentration and volumetric flow rate of the effluent gases, shall be determined according to USEPA Reference Method 5A.

7.1.II-8 Monitoring Requirements

None

7.1.II-9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for each affected sandblasting machine to demonstrate compliance with conditions of this permit, pursuant to Section 39.5(7)(b) of the Act:

- a. Total raw material or product throughput, in terms of ton/month and ton/year.
- b. Recordkeeping of maintenance and repair [35 IAC 212.324(g)]:
 - i. Written or electronic records of inventory and documentation of inspections,

maintenance, and repairs of all air pollution control equipment.

- ii. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state what corrective actions were taken and what repairs were made.
 - iii. A written or electronic record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated.
 - iv. Copies of all maintenance and repair records shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA.
 - v. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when the air pollution control equipment was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made.
- c. Monthly and annual emissions of PM₁₀ calculated in accordance with compliance procedures established in Condition 7.1.II-12.

7.1.II-10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with applicable emission limitations as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

If there is an exceedance of the emission limitations of this permit as determined by the records required by

this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois 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

7.1.II-11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.1.II-12 Compliance Procedures

- a. Compliance with the emission limits is assured and achieved by the proper operation and maintenance of the control equipment as required by this section and the work-practices inherent in operation of an affected sandblasting machines.
- b. To determine compliance with Condition 7.1.II-3, emissions from the affected sandblasting machine shall be calculated based on the following:

PM Emissions* = (Air Flow, cfm) x (Estimated Dust Loading, gr/scf) x (1 lb/7,000 gr) x (60 minutes/hr) x [1 - (Dust Collector Efficiency (%)/100)]

- * As specified by the manufacturer or vendor of the filter, or air testing of the actual equipment, or testing of similar equipment at this or other facilities, or based on vendor or manufacturer outlet concentration guarantees or predicted outlet emission performance, or based on the standard EPA emission factors such as AP-42. If compliance testing has been conducted to determine mass emission rates, then the test data may be used in lieu of the above. Vendor outlet concentration guarantees and predicted performance, or experience with similar equipment, may be used in place the equation above.

7.2 Dry Starch Unit

7.2.1 Description

In the production of dry starch, the starch slurry is dewatered. The discharged starch cake has a reduced moisture content and is further dried by direct fired natural gas flash dryers. The dry starch is then bagged or loaded for shipment in trucks and railcars.

7.2.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Equipment	Description/Date of Construction	Emission Control Equipment
Group 2	Dry Starch Unit	Bldg 25 Packaging Equip. Prior to 1972	Filter
		Bldg 25 Railcar Bulk Loading, 1975	Filters
		Starch Storage Silos #1 - #3, 1975	Filters
		Bldg 25 Truck Bulk Loading, 1975	Filter
		Starch Transport to Bldg 25 Packing Hopper, 1975	Cyclone and Filter
		Calcium Carbonate Bag Dump and Hopper, 1975	Filter
		Starch Storage Silos #4 and #5, 1975	Filters
		Bldg 27A Starch Flash Dryer, Prior to 1972	Wet Scrubber and Cyclones
		Bldg 27B Starch Flash Dryer, Prior to 1972	Wet Scrubber and Cyclones
		Bldg 27C Starch Flash Dryer, 1975	Wet Scrubbers and Cyclones
		Spray Dryer, 1997	Cyclone and Dust Collector

7.2.3 Applicability Provisions and Applicable Regulations

- a. An "affected dry starch unit" for the purpose of these unit specific conditions is a number of drying, packaging and loading operations of starch products.
- b. Each affected dry starch unit is subject either to 35 IAC 212.321(b)(1) or 35 IAC 212.322(b)(1), which provide that:
 - i. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (See also Attachment 2) [35 IAC 212.321(a)].
 - ii. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced prior to April 14, 1972, which either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (See also Attachment 2) [35 IAC 212.322(a)].
- c. PM₁₀ emissions from this location are regulated by 35 IAC Part 212 Subpart N: "Food Manufacturing". Specifically, the following emission limits are established in 35 IAC 212.362(b)(4) for specific emission units operated by the Permittee in the Village of Bedford Park west of Archer Avenue:

No person shall cause or allow the emission of PM₁₀, other than that of fugitive particulate matter, into the atmosphere to exceed the following limits during any one-hour period:

45.8 mg/scm (0.02 gr/scf) for starch dust collection systems, starch processing/transport systems, starch dryers, starch transport systems, calcium carbonate storage systems, starch loading systems.

- d. For all other emission units associated with the affected dry starch unit, emissions of PM₁₀ from each such unit shall not exceed 68.7 mg/scm (0.03 gr/scf) during any one hour period, pursuant to 35 IAC 212.324(b).

7.2.4 Non-Applicability of Regulations of Concern

The operations of this facility are exempted from the control requirements of 35 IAC Part 218, Subpart TT because this facility is involved in vegetable oil extraction and processing, and pursuant to 35 IAC 218.980(f) such operations are exempted from applicability of Subpart TT.

7.2.5 Operational and Production Limits and Work Practices

For any process emission unit located in the PM₁₀ non-attainment areas designated in 35 IAC 212.324(a), the Permittee shall maintain and repair all air pollution control equipment in a manner that assures that the emission limits and standards in 35 IAC 212.324 shall be met at all times. Proper maintenance shall include the following minimum requirements, pursuant to 35 IAC 212.324(f):

- a. Visual inspection of air pollution control equipment;
- b. Maintenance of an adequate inventory of spare parts; and
- c. Expeditious repairs, unless the emission unit is shutdown.

7.2.6 Emission Limitations

In addition to Condition 5.2.2, an affected dry starch unit is subject to the following:

- a. See Attachments in Section 10 for other operating and emission limits established in the Construction Permit 93010072. These limits ensure that the construction and/or modification addressed in the aforementioned Construction Permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].
- b. Compliance with annual limits shall be determined based on the 12 months of data.

7.2.7 Testing Requirements

None

7.2.8 Monitoring Requirements

None

7.2.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for the affected dry starch unit to demonstrate compliance with conditions of this permit, pursuant to Section 39.5(7)(b) of the Act:

- a. Recordkeeping of maintenance and repair [35 IAC 212.324(g)]:
 - i. Written or electronic records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment.
 - ii. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state what corrective actions were taken and what repairs were made.
 - iii. A written or electronic record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated.
 - iv. Copies of all maintenance and repair records shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA.
 - v. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when air the air pollution control equipment

was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made.

- b. Monthly and annual emissions of PM₁₀ calculated in accordance with compliance procedures established in Condition 7.2.12.

7.2.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the emission limitations as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

If there is an exceedance of the emission limitations of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois 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.

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.2.12 Compliance Procedures

- a. Compliance with the particulate matter limitations in this section is assured and achieved by the proper operation and maintenance of the dust collectors as required by this section and the work-practices inherent in operation of the affected dry starch unit.
- b. To determine compliance with Condition 7.2.6, emissions of PM₁₀ from the affected dry starch unit shall be calculated based on the following:

PM Emissions* = (Air flow, cfm) x (Estimated Dust Loading, gr/scf) x (1 lb/7,000 gr) x (60 minutes/hr) x [1 - (Filter Efficiency (%)/100)].

* As specified by the manufacturer or vendor of the filter, or air testing of the actual equipment, or testing of similar equipment at this or other facilities, or based on vendor or manufacturer outlet concentration guarantees or predicted outlet emission performance, or based on the standard EPA emission factors such as AP42. If compliance testing has been conducted to determine mass emission rates, then the test data may be used in lieu of the above. Vendor outlet concentration guarantees and predicted performance, or experience with similar equipment, may be used in place the equation above.

7.3. Dextrose Unit

7.3.1 Description

The Dextrose Unit produces crystalline dextrose from liquid sugar supplied by another part of the plant. Liquid sugar is cooled in crystallizers, followed by separation of the crystals and remaining liquid in centrifuges. Wet dextrose crystals are first dried in rotary dryers and then packed in bags, or loaded for shipment in railcars or trucks.

7.3.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Equipment	Description/Date of Construction/Modification	Emission Control Equipment
Group 3	Dextrose Unit	Building 46 Anhydrous Cerelease Dryer and Cooler System, Prior to 1972	Cyclones and Wet Scrubber
		"C" Sugar Dryer, 1975	Cyclone and Wet Scrubber
		"A" Sugar Dryer, 1989	Cyclone and Wet Scrubber
		"E" Sugar Dryer, 1980's	Cyclone and Wet Scrubber
		"D" Sugar Dryer, Prior to 1972	Cyclone and Wet Scrubber
		Bulk Sugar Transport Systems #1-#3, 1980's	Filters
		"A" Dryer Transport Exhauster, 1980's	Cyclone and Filter
		"D" Dryer Transport Exhauster, 1980's	Cyclone and Filter
		"E" Dryer Transport Exhauster, 1980's	Cyclone and Filter
		"C" Dryer Transport Exhauster, 1980's	Cyclone and Filter
		2401 Sugar Transport Blower, 1980's	Filter
		2034(2054) Sugar Transport Blower (Unidex 1), 1980's	Filter 48A20-01

Emission Unit	Equipment	Description/Date of Construction/Modification	Emission Control Equipment
		2031 and 2034 Bulk Sugar Transport System (Royal T), 1995	Filters 48A35-01 48A124
		#1 and #2 Melt Tank and Bag Dump, 1980's	Wet Scrubbers
		Bulk Loading Dust Collecting System, 1980's	Wet Scrubber
		House Dust Pickup System Off Puff and Packer Control Hoppers, 1980's	Wet Scrubber 48A36-1
		Sugar Packers, 1980's	Wet Scrubber
		2034 Bldg Sugar Drying/Cooling and Sugar Product Conveying and Handling, 1980's	Filter 34S02
		"B" Sugar Dryer, 1993	Cyclone, Scrubber
		"B" Sugar Dryer Transport System, 1993	Cyclone, Filter
		Fine Grade Dextrose Channel Mill, 1993	Filter 48A120
		Dextrose Product Receiver (2nd Unidex), 1997	Filter 34A31
		Fluid Bed Dryer System (2nd Unidex), 1997	Filter
		Product Collector Rejects (2nd Unidex), 1997	Filter
		Pneumatic Conveying System #2 (2nd Unidex), 1997	Filter 48A330
		VFG Dextrose Transport Line and Storage Silo, 1998	Filter
		Dextrose Conditioning Silos, 1998	Filters
		B44 Dry Sugar Bagging, 2000	Filter

7.3.3 Applicability Provisions and Applicable Regulations

- a. An "affected dextrose unit" for the purpose of these unit specific conditions combines a number of operations where liquid dextrose is crystallized, dried, transported, stored, and packed in bags or loaded out in bulk by truck or rail.

- b. An affected dextrose unit is subject either to 35 IAC 212.321(b)(1) or 35 IAC 212.322(b)(1), which provide that:
- i. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (See also Attachment 2) [35 IAC 212.321(a)].
 - ii. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced prior to April 14, 1972, which either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (See also Attachment 2) [35 IAC 212.322(a)].
- c. PM₁₀ emissions from this location are regulated by 35 IAC Part 212 Subpart N: "Food Manufacturing". Specifically, the following emission limits are established in 35 IAC 212.362(b)(1) and 212.362(b)(4) for specific emission units operated by the Permittee in the Village of Bedford Park west of Archer Avenue:

No person shall cause or allow the emission of PM₁₀, other than that of fugitive particulate matter, into the atmosphere to exceed the following limits during any one-hour period:

22.9 mg/scm (0.01 gr/scf) for dextrose dryers, dextrose melt tank systems, bulk dextrose loading systems, house dry dextrose dust systems, dextrose bagging machine dust system, dextrose expansion dryer/cooler and packing systems and 2034 dextrose dryer/cooler dust collecting system.

45.8 mg/scm (0.02 gr/scf) for dextrose transport systems, and dextrose expansion milling and storage systems.

- d. For all other emission units associated with the affected dextrose unit, emissions of PM₁₀ from each such unit shall not also exceed 68.7 mg/scm (0.03 gr/scf) during any one hour period, pursuant to 35 IAC 212.324(b).

7.3.4 Non-Applicability of Regulations of Concern

The operations of this facility are exempted from the control requirements of 35 IAC Part 218, Subpart TT because this facility is involved in vegetable oil extraction and processing, and pursuant to 35 IAC 218.980(f) such operations are exempted from applicability of Subpart TT.

7.3.5 Operational and Production Limits and Work Practices

For any process emission unit located in the PM₁₀ non-attainment areas designated in 35 IAC 212.324(a), the Permittee shall maintain and repair all air pollution control equipment in a manner that assures that the emission limits and standards in 35 IAC 212.324 shall be met at all times. Proper maintenance shall include the following minimum requirements, pursuant to 35 IAC 212.324(f):

- a. Visual inspection of air pollution control equipment;
- b. Maintenance of an adequate inventory of spare parts; and
- c. Expeditious repairs, unless the emission unit is shutdown.

7.3.6 Emission Limitations

In addition to Condition 5.2.2, an affected dextrose unit is subject to the following:

i. Dextrose Conditioning Silos

Emissions and operation of the silos shall not exceed the following limits:

Total Exhaust (scfm)	PM ₁₀ Emissions (lb/hr) (ton/yr)	
8,525	0.776	3.40

The above limitations were established in Construction Permit 98070021, pursuant to 35 IAC Part 203. These limits ensure that the construction and/or modification addressed in the aforementioned Construction Permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].

- ii. See Section 10.1, Attachment 1 for the operating and emission limits established in the Construction Permit(s) and addressing other emission units. These limits ensure that the construction and/or modification addressed in the aforementioned Construction Permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].

7.3.7 Testing Requirements

None

7.3.8 Monitoring Requirements

None

7.3.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for the affected dextrose unit to demonstrate compliance with conditions of this permit, pursuant to Section 39.5(7)(b) of the Act:

- a. Recordkeeping of maintenance and repair [35 IAC 212.324(g)]:
 - i. Written or electronic records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment.
 - ii. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state what corrective actions were taken and what repairs were made.

- iii. A written or electronic record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated.
 - iv. Copies of all maintenance and repair records shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA.
 - v. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when air the air pollution control equipment was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made.
- b. Monthly and annual emissions of PM₁₀ calculated in accordance with compliance procedures established in Condition 7.3.12.

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the emission limitations as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

If there is an exceedance of the emission limitation of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois 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.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.3.12 Compliance Procedures

- a. Compliance with the particulate matter limitations in this section is assured and achieved by the proper operation and maintenance of the scrubbers and filters as required by this section and the work-practices inherent in operation of the dextrose unit.
- b. To determine compliance with Condition 7.3.6, emissions of PM₁₀ from the affected dextrose unit shall be calculated based on the following:

$$\text{PM Emissions*} = (\text{Air flow, cfm}) \times (\text{Estimated Dust Loading, gr/scf}) \times (1 \text{ lb}/7,000 \text{ gr}) \times (60 \text{ minutes/hr}) \times [1 - (\text{Control Device Efficiency} (\%)/100)].$$

- * As specified by the manufacturer or vendor of the filter, or air testing of the actual equipment, or testing of similar equipment at this or other facilities, or based on vendor or manufacturer outlet concentration guarantees or predicted outlet emission performance, or based on the standard EPA emission factors such as AP42. If compliance testing has been conducted to determine mass emission rates, then the test data may be used in lieu of the above. Vendor outlet concentration guarantees and predicted performance, or experience with similar equipment, may be used in place the equation above.

7.4 Group 4: Germ Processing Facility

7.4.1 Description

Dried germ is received/unloaded, stored, and prepared for hexane extraction of corn oil from the germ utilizing a highly efficient solvent recovery system. In the corn oil extraction process over 99%+ of the extraction solvent is captured and returned for reuse in the process. The crude corn oil which has been extracted from the germ is next sent to the vegetable oil refinery unit for further processing and the remaining spent germ flake is transferred to the co-products portion of the wet milling and co-products unit for mixing with fiber to make corn gluten animal feed.

7.4.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Equipment	Description/ Date of Construction	Emission Control Equipment
Group 4	Germ Processing Facility	Germ Unloading, 1993	Baghouse 85A02
		Argo Germ Pneumatic Conveyor and Baghouse/ Receiver, 1993	Baghouse 85A01
		Germ Processing - Dry Preparation Systems and Storage, 1993	Baghouse 86A09
		Germ Processing - Wet Preparation, 1993	Wet Scrubbers
		Germ Processing - Mineral Oil Absorber, 1993	Mineral Oil Absorber, Condensers
		Germ Processing - Spent Flake Finishing, 1993	None
		Corn Oil Refining and Loadout, 1993	None
		Safety Sump, 1993	None
		Dryer/Cooler, 1993	Baghouse 87A12
		Cooling Tower, 1993	None

7.4.3 Applicability Provisions and Applicable Regulations

- a. An "affected germ processing facility" for the purpose of these unit specific conditions is an oil extraction plant.
- b. An affected germ processing facility is subject to 35 IAC 212.321(b)(1), which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (See also Attachment 2) [35 IAC 212.321(a)].

- c. PM₁₀ emissions from this location are regulated by 35 IAC Part 212 Subpart N: "Food Manufacturing". Specifically, the following emission limits are established in 35 IAC 212.362(b)(2), (3), and (4) for specific emission units operated by the Permittee in the Village of Bedford Park west of Archer Avenue:

No person shall cause or allow the emission of PM₁₀, other than that of fugitive particulate matter, into the atmosphere to exceed the following limits during any one hour period:

- i. 68.7 mg/scm (0.03 gr/scf) for germ cake transport system; and
 - ii. 45.8 mg/scm (0.02 gr/scf) for germ transport system.
- d. For all other emission units associated with the affected germ processing facility, emissions of PM₁₀ from each such unit shall not also exceed 68.7 mg/scm (0.03 gr/scf) during any one hour period, pursuant to 35 IAC 212.324(b).

7.4.4 Non-Applicability of Regulations of Concern

- a. The operations of this facility are exempted from the control requirements of 35 IAC Part 218, Subpart TT because this facility is involved in vegetable oil extraction and processing, and pursuant to 35 IAC

218.980(f) such operations are exempted from applicability of Subpart TT.

- b. The affected germ processing facility is exempted from applicability of 35 IAC Part 218, Subpart G because the hexane released from this facility is not a photochemically reactive material and does not create any odor nuisance.

7.4.5 Operational and Production Limits and Work Practices

For any process emission unit located in the PM₁₀ non-attainment areas designated in 35 IAC 212.324(a), the Permittee shall maintain and repair all air pollution control equipment in a manner that assures that the emission limits and standards in 35 IAC 212.324 shall be met at all times. Proper maintenance shall include the following minimum requirements, pursuant to 35 IAC 212.324(f):

- a. Visual inspection of air pollution control equipment;
- b. Maintenance of an adequate inventory of spare parts; and
- c. Expeditious repairs, unless the emission unit is shutdown.

7.4.6 Emission Limitations

In addition to Condition 5.2.2, the affected germ processing facility is subject to the following limitations:

Total Germ Throughput (ton/year)	Total Hexane Usage (ton/year)	Emissions			
		PM ₁₀ * (ton/mo)(ton/yr)		VOM (ton/mo)(ton/yr)	
600,000	887	5.62	67.5	73.9	887

* This total applies to PM₁₀ emissions from the following: Germ Unloading, Argo Germ Pneumatic Conveyor and Baghouse Receiver, Germ Processing -Dry Preparation, Germ Processing - Wet Preparation, Dryer/Cooler

- a. The above limitations contain revisions to previously issued Construction Permit 92070079. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the

conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, germ throughput has been increased [T1R].

- b. Compliance with the limits of this permit shall be determined based on the 12 month rolling average.
- c. The construction of the affected germ processing facility was first permitted in 1993 and based on the net decreases of VOM and PM₁₀ emissions from this project by 106 tons/year and 1.0 ton/year, respectively.

7.4.7 Testing Requirements

None

7.4.8 Monitoring Requirements

None

7.4.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for the affected germ processing facility to demonstrate compliance with conditions of this permit, pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall maintain the following records for maintenance and repair as required by 35 IAC 212.324(g):
 - i. Written or electronic records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment;

- ii. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state what corrective actions were taken and what repairs were made;
 - iii. A written or electronic record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated;
 - iv. Copies of records shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA; and
 - v. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when the air pollution control equipment was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made.
- b. Germ throughput, ton/year.
 - c. Amount of hexane received and hexane losses, ton/month and ton/year.
 - d. Monthly and annual emissions of PM₁₀ and VOM and calculated in accordance with compliance procedures in Condition 7.4.12.

7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the emission limitations as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

If there is an exceedance of the emission limitations of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance first becomes known. 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.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.4.12 Compliance Procedures

- a. Compliance with the particulate matter limitations in Condition 7.4.3(c) is assured and achieved by the proper operation and maintenance of the filters and scrubbers as required by this section and the work-practices inherent in operation of the affected germ processing facility.
- b. To determine compliance with Condition 7.4.6, emissions of PM_{10} and VOM from the affected germ processing plant shall be calculated based on the following:
 - i. PM_{10} :

PM_{10} Emissions* = (Air flow, cfm) x (Estimated Dust Loading, gr/scf) x (1 lb/7,000 gr) x (60 minutes/hr) x [1 - (Control Device Efficiency (%)/100)].

- * As specified by the manufacturer or vendor of the filter, or air testing of the actual equipment, or testing of similar equipment at this or other facilities, or based on vendor or manufacturer outlet concentration guarantees or predicted outlet emission performance, or based on the standard EPA emission factors such as AP-42. If compliance testing has been conducted to determine mass emission rates, then the test data may be used in lieu of the above. Vendor outlet concentration guarantees and predicted performance, or experience with similar

equipment, may be used in place the equation above.

ii. VOM:

VOM Emissions = Total Hexane Losses, Tons.
The amount of hexane loss shall be determined by the amount of hexane received plus the net change in inventory.

7.5. Group 5: Sugar Refinery

7.5.1 Description

The starch slurry is converted into corn syrup and high fructose corn syrup utilizing acid and enzymes to hydrolyze the starch. The hydrolyzed liquor is then refined and purified to remove unconverted starch and impurities utilizing filtration and ion exchange processes. The syrups are next concentrated to the desired level in evaporators and cooled for storage and shipping.

7.5.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Equipment	Description/Date of Construction	Emission Control Equipment
Group 5	Sugar Refinery	Soda Ash Unloading System, 1980s	Filter
		Filter Aid Unloading System Transport #41A07 and #49A08, 1980s	Filters
		Ammonia Storage Tank, 1980's, 1995	Wet Scrubber
		Precoat Filters, 1980's	None
		Precoat Filter Vacuum Pumps, 1980s	None
		HCL Storage Tanks, 1989	HCL Scrubber

7.5.3 Applicability Provisions and Applicable Regulations

- a. An "affected sugar refinery operations" for the purpose of these unit specific conditions is a number of operations and equipment for syrups manufacturing.
- b. PM₁₀ emissions from this location are regulated by 35 IAC Part 212 Subpart N: "Food Manufacturing". Specifically, the following emission limits are established in 35 IAC 212.362(b)(4) for specific emission units operated by the Permittee in the Village of Bedford Park west of Archer Avenue:

No person shall cause or allow the emission of PM₁₀, other than that of fugitive particulate

matter, into the atmosphere to exceed the following limits during any one-hour period:

45.8 mg/scm (0.02 gr/scf) for soda ash unloading systems and filter aid systems

- c. For all other emission units associated with the affected sugar refinery operations, emissions of PM₁₀ from each such unit shall not exceed 68.7 mg/scm (0.03 gr/scf) during any one hour period, pursuant to 35 IAC 212.324(b).
- d. The affected sugar refinery is subject to 35 IAC 212.321(b)(1), which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (See also Attachment 2) [35 IAC 212.321(a)].

7.5.4 Non-Applicability of Regulations of Concern

The operations of this facility are exempted from the control requirements of 35 IAC Part 218, Subpart TT because this facility is involved in vegetable oil extraction and processing, and pursuant to 35 IAC 218.980(f) such operations are exempted from the applicability of Subpart TT.

7.5.5 Operational and Production Limits and Work Practices

For any process emission unit located in the PM₁₀ non-attainment areas designated in 35 IAC 212.324(a), the Permittee shall maintain and repair all air pollution control equipment in a manner that assures that the emission limits and standards in 35 IAC 212.324 shall be met at all times. Proper maintenance shall include the following minimum requirements, pursuant to 35 IAC 212.324(f):

- a. Visual inspection of air pollution control equipment;
- b. Maintenance of an adequate inventory of spare parts;
and

- c. Expeditious repairs, unless the emission unit is shutdown.

7.5.6 Emission Limitations

See Section 10.1, Attachment 1 for emission limits established for sugar refinery operations.

7.5.7 Testing Requirements

None

7.5.8 Monitoring Requirements

None

7.5.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for the affected sugar refinery operations to demonstrate compliance with conditions of this permit, pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall maintain the following records for maintenance and for repair of soda ash unloading system as required by 35 IAC 212.324(g):
 - i. Written or electronic records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment;
 - ii. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state what corrective actions were taken and what repairs were made;
 - iii. A written or electronic record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated;

- iv. Copies of records shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA; and
 - v. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when the air pollution control equipment was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made.
- b. Monthly and annual emissions of PM₁₀ and calculated in accordance with compliance procedures in Condition 7.5.12.

7.5.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the emission limitations as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

If there is an exceedance of the emission limitations of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois 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.

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.5.12 Compliance Procedures

Compliance with the particulate matter limitations in Condition 7.5.3(c) is assured and achieved by the proper operation and maintenance of the filters and scrubbers as required by this section and the work-practices inherent in operation of the affected sugar refinery operations.

7.6 Group 6: Wet Milling and Co-Products Operations

7.6.1 Description

Shelled corn is soaked in steeping liquor to condition the grain for separation into its' constituents of starch, gluten, germ and fiber utilizing a wet milling process. Following the soaking process, the corn is milled and the germ is separated from the remaining ingredients via hydroclones, dewatered and dried before further processing to remove the oil from the germ. The remaining ingredients are further separated via milling, screening and centrifugation into starch, gluten and fiber.

7.6.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Equipment	Description/Date of Construction	Emission Control Equipment
Group 6	Wet Milling and Co-Products Operations	Building 1B Corn Unloading Station, 1975	Cyclones
		Corn Truck Unloading System, 1980's	Baghouse
		Corn Storage Silos (2), 1980's	Baghouse
		Spent Flake Transport/Storage, 1980's	Baghouses
		Spent Flake Transport Blower, 1980's	Baghouses
		Corn Cleanings to Dryers and Storage Transport Systems, 1980's	Baghouses
		Co-Products Dryers and Coolers with Control System, 1980's, 1995 to 1997	Cyclones, Scrubbers, Thermal Oxidizers

Emission Unit	Equipment	Description/Date of Construction	Emission Control Equipment
		Feed Transport Blower, 1980's	Baghouse
		Gluten Cooler Draft System, 1980's	Scrubber
		Cooled Gluten Transport System, 1980's	Baghouse
		Feed Mill Dust System, 1980's	Baghouse
		Gluten Storage Dust System, 1980's	Baghouse
		Feed Storage and Loadout System, 1980's	Baghouses
		Corn Wet Milling Tanks, 1980's	None
		Gluten Filters and Vacuum Pumps, 1980's, 1995, and 1996	None
		Corn Feed Mixing Conveyors, 1980's	None
		Conveyor (11G66) and Bucket Elevator (11G69), 1995	Baghouse
		Pellet Milling and Cooling, 1980's, 1995, and 1996	Cyclones and Scrubbers
		Wet Mill Air Heater, 1990	None
		Molten Sulfur Burner and Absorption System, 1995	Absorbers
		Steep Acid Storage and Process Tanks, 1980's, 1994	Scrubbers

7.6.3 Applicability Provisions and Applicable Regulations

- a. An "affected wet milling and co-products operations" for the purpose of these unit specific conditions are equipment used for the corn milling and the germ separation from the remaining ingredients via cyclones, dewatering and drying before further processing to remove the oil from the germ.
- b. PM₁₀ emissions from this location are regulated by 35 IAC Part 212 Subpart N: "Food Manufacturing". Specifically, the following emission limits are established in 35 IAC 212.362(b)(2), (b)(3), and (b)(4) for specific emission units operated by the Permittee in the Village of Bedford Park west of Archer Avenue:

No person shall cause or allow the emission of PM₁₀, other than that of fugitive particulate matter, into the atmosphere to exceed the following limits during any one-hour period:

34.3 mg/scm (0.015 gr/scf) for feed dryers, gluten dryers, germ dryers, and heat recovery scrubbers.

68.7 mg/scm (0.03 gr/scf) for pellet cooler systems.

45.8 mg/scm (0.02 gr/scf) for corn unloading systems, corn silo systems, spent flake storage systems, corn cleaning transport systems, feed transport cooling systems, gluten cooling systems, gluten transport systems, feed dust systems, gluten dust systems, spent flake transport systems, and pellet dust systems.

- c. For all other emission units associated with the affected wet milling and co-products operations, emissions of PM₁₀ from each such unit shall not exceed 68.7 mg/scm (0.03 gr/scf) during any one hour period, pursuant to 35 IAC 212.324(b).
- d. The affected wet milling and co-products operations are subject to 35 IAC 212.321(b)(1), which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission

unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (See also Attachment 2) [35 IAC 212.321(a)].

- e. Emissions of sulfur dioxide shall not exceed 2000 ppm from any emission unit, pursuant to 35 IAC 214.301.
- f. The affected wet milling and co-products operations are subject to either of the following limits established by 35 IAC Part 218 Subpart G "Use of Organic Material":
 - i. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission unit if odor nuisance exists and/or applied organic materials are photochemically reactive [35 IAC 218.301].
 - ii. Emissions of organic material in excess of those established by 35 IAC 218.301 are allowable if such emissions are controlled by one of the following methods:
 - Incineration device or vapor recovery system which reduce uncontrolled organic material emissions by at least 85 percent [35 IAC 218.302].

7.6.4 Non-Applicability of Regulations of Concern

- a. The wet mill air heater as well as each gluten dryer along with a thermal oxidizer is not subject to 35 IAC 216.121, Emissions of Carbon Monoxide from Fuel Combustion Emission Units, because each such unit is not by definition a fuel combustion emission unit.
- b. The wet mill air heater as well as each gluten dryer along with a thermal oxidizer is not subject to 35 IAC 217.121, Emissions of Nitrogen Oxides from New Fuel Combustion Emission Units, because each such unit is not by definition a fuel combustion emission unit.
- c. The operations of this facility are exempted from the control requirements of 35 IAC Part 218, Subpart TT because this facility is involved in vegetable oil

extraction and processing, and pursuant to 35 IAC 218.980(f) such operations are exempted from the applicability of Subpart TT.

7.6.5 Operational and Production Limits and Work Practices

- a. The regenerative thermal oxidizer combustion chamber shall be preheated to the manufacturer's recommended temperature but not lower than 1400°F, before drying/cooling process is begun, and this temperature shall be maintained at least 99% of the time during operation of the affected emission unit(s).
- b. The regenerative thermal oxidizers shall be in operation at all times that the associated emission unit(s) is in operation and emitting VOM and odors except as provided for elsewhere in this permit. The regenerative thermal oxidizers shall not be seasonally shut down as would be allowed in 35 IAC 218.107.
- c. Each emission unit covered in this subsection shall not operate more than 744 hours per month and 8,550 hours per year, except as provided below. Pollution control devices, as well as regenerative thermal oxidizers, are not limited to 8,550 hours per year.

Specific Limits on Equipment:

Argo 2-018, Corn Truck Unloading	8,760 hrs/yr
Argo 2-019, Corn Storage Silos	8,736 hrs/yr
Argo 2-043A, Corn Wet Milling Tanks	8,760 hrs/yr
Argo 2-043L, Corn Mixing Conveyors	8,760 hrs/yr
Argo 2-047, Conveyor 11G66 and Elev.	8,736 hrs/yr
Argo 2-059, Molten Sulfur System	8,760 hrs/yr
Argo 2-059, Steep Acid & Proc Tanks	8,760 hrs/yr
A-01B-104, 1B Corn Unloading Sta.	8,736 hrs/yr

- d. The wet mill drying area shall not discharge through the secondary exhausts (the direct Stage 1/Stage 2 scrubber exhausts) without passage through the gluten dryer furnace/duct burner system, for more than 500 hours per line annually.
- e. Stage 1 scrubber or Stage 2 scrubber shall be in operation when the germ and feed dryers are operating.
- f. Natural gas shall be the only fuel fired in the gluten dryer furnace/duct burner systems.

- g. For any process emission unit located in the PM₁₀ non-attainment areas designated in 35 IAC 212.324(a), the Permittee shall maintain and repair all air pollution control equipment in a manner that assures that the emission limits and standards in 35 IAC 212.324 shall be met at all times. Proper maintenance shall include the following minimum requirements, pursuant to 35 IAC 212.324(f):
 - i. Visual inspection of air pollution control equipment;
 - ii. Maintenance of an adequate inventory of spare parts; and
 - iii. Expeditious repairs, unless the emission unit is shutdown.

7.6.6 Emission Limitations

See Section 10.1, Attachment 1 for unit specific emission limits.

7.6.7 Testing Requirements

- a. Upon the Illinois EPA request the emissions shall be measured as follows, by an approved testing service during conditions that are representative of maximum operation and emissions:

If the wet mill drying area discharges through a secondary exhaust on a line for 300 hours or more in a year or for 100 hours or more in a calendar year with only a single scrubber in operation, the PM₁₀ and SO₂ emissions of the secondary exhaust shall be measured for the PM₁₀ and SO₂ present in the duct work shall be measured at a point following the Stage 1/Stage 2 scrubbers but prior to the furnace/duct burner system. These measurements shall be conducted within one year.

- b. The following methods and procedures shall be used for testing of emissions, unless another method is approved by the Illinois EPA: Refer to 40 CFR 60, Appendix A for USEPA test methods.

Location and Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Particulate Matter	USEPA Method 5
Sulfur Dioxide	USEPA Method 6

7.6.8 Monitoring Requirements

- a. Continuous monitoring system shall be installed, operated, calibrated and maintained for the scrubbers on the dryer systems to verify proper operation of the scrubber, pursuant to 35 Ill. Adm. Code 201.181. The monitoring shall include the scrubbant temperature and flow rate of the scrubbant fluid.
- b. A continuous monitor shall be installed, operated and maintained for temperature above 120°F to identify flow through the secondary exhausts of the wet mill drying area.
- c. The regenerative thermal oxidizers shall be equipped with continuous temperature monitoring equipment which is installed, calibrated, maintained, and operated according to vendor specifications all times the regenerative thermal oxidizer is in use.
- d. The regenerative thermal oxidizers shall be equipped with a continuous recorder for the temperature monitoring device(s), such as a strip chart recorder or computer, for measuring combustion chamber temperature of the regenerative thermal oxidizers.

7.6.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for the affected gas-fired dryers/coolers to demonstrate compliance with conditions of this permit, pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall maintain the following records for maintenance and repair as required by 35 IAC 212.324(g):
 - i. Written or electronic records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment;
 - ii. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation, or was malfunctioning, so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not

operating or such malfunction and shall state what corrective actions were taken and what repairs were made;

- iii. A written or electronic record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated;
 - iv. Copies of records shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA; and
 - v. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when the air pollution control equipment was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made.
- b. Hours of operation of the expanded facility and/or individual emission units.
 - c. Fuel usage for the gluten dryer furnace/duct burner system on a monthly and annual basis.
 - d. The pressure drop across dry collection systems (excluding cyclones) and the scrubbant flow for wet collection systems to show compliance with the particulate matter emissions.
 - e. The Permittee shall maintain detailed records for the secondary exhausts of the wet mill drying area and the Stage 1 and Stage 2 scrubbers, including, date and time of discharges based on the monitoring requirements, with operating status of individual scrubbers; duration of discharge, and for any discharge exceeding one hour the reason for discharge and scrubber outage (if any) and other relevant information to enable the discharge to be evaluated.
 - f. Emissions of regulated air pollutants to enable verifying compliance with the limits established in Section 10.1, Attachment 1.

7.6.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the emission limitations as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

If there is an exceedance of the emission limitations of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois 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.

7.6.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.6.12 Compliance Procedures

- a. Compliance with the particulate matter limitations in this section is assured and achieved by the proper operation and maintenance of the filters and wet scrubbers as required by this section and the work-practices inherent in operation of the affected wet milling and co-products operations.
- b. To calculate emissions of PM₁₀ the following equation shall be used:

$$\text{PM Emissions}^* = (\text{Air flow, cfm}) \times (\text{Estimated Dust Loading, gr/scf}) \times (1 \text{ lb}/7,000 \text{ gr}) \times (60 \text{ minutes/hr}) \times [1 - (\text{Control Device Efficiency} (\%)/100)].$$

- * As specified by the manufacturer or vendor of the filter, or air testing of the actual equipment, or testing of similar equipment at this or other facilities, or based on vendor or manufacturer outlet concentration guarantees or predicted outlet emission performance, or based on the standard EPA emission factors such as AP-42. If compliance testing has been conducted to determine mass emission rates, then the test data may be used in

lieu of the above. Vendor outlet concentration guarantees and predicted performance, or experience with similar equipment, may be used in place the equation above.

7.7 Group 7: Vegetable Oil Refinery

7.7.1 Description

The crude corn oil from germ is refined, bleached, winterized and deodorized. The process results in by-products of soap stock, acid oil, middlings and deodorizer distillate all of which are sold for feedstocks for other processes.

7.7.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Equipment	Description/Date of Construction	Emission Control Equipment
Group 7	Vegetable Oil Refinery	Bleach Clay Processing, Pre-1970	Filter
		Diatomaceous Earth Rail Car Unloading, Transfer, and Storage, 1994	Filters
		Dowtherm Boiler, 1993	None
		Dryer, Deaerator, Bleacher, Deodorizer, Spray Tower, Vacuum Intercondensers, Pre-1970	None
		Acidulation Process. Pre 1970	None

7.7.3 Applicability Provisions and Applicable Regulations

- a. An "affected vegetable oil refinery" for the purpose of these unit specific conditions is equipment to refine, bleach, winterize, and deodorize vegetable oil.
- b. PM₁₀ emissions from this location are regulated by 35 IAC Part 212 Subpart N: "Food Manufacturing". Specifically, the following emission limits are established in 35 IAC 212.362(b)(3) and (b)(4) for specific emission units operated by the Permittee in the Village of Bedford Park west of Archer Avenue:

No person shall cause or allow the emission of PM₁₀, other than that of fugitive particulate matter, into the atmosphere to exceed the following limits during any one hour period:

68.7 mg/scm (0.03 gr/scf) for bleaching clay systems.

45.8 mg/scm (0.02 gr/scf) for dicalite systems.

- c. For all other emission units associated with affected vegetable oil refinery, emissions of PM₁₀ from each such unit shall not also exceed 68.7 mg/scm (0.03 gr/scf) during any one hour period, pursuant to 35 IAC 212.324(b).

- d. The affected vegetable oil refinery is subject to the following limit established by 35 IAC Part 218 Subpart G "Use of Organic Material":

No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission unit if odor nuisance exists and/or applied organic materials are photochemically reactive [35 IAC 218.301].

- e. The affected vegetable oil refinery is subject to 35 IAC 212.321(b)(1), which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (See also Attachment 2) [35 IAC 212.321(a)].

- f. The affected vegetable oil refinery is subject to 35 IAC 212.322(b)(1), which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced prior to April 14, 1972, at a source or premises, exceeds the allowable emission rates specified

in subsection (c) of 35 IAC 212.322 (See also Attachment 2) [35 IAC 212.322(a)].

7.7.4 Non-Applicability of Regulations of Concern

The operations of this facility are exempted from the control requirements of 35 IAC Part 218, Subpart TT because this facility is involved in vegetable oil extraction and processing, and pursuant to 35 IAC 218.980(f) such operations are exempted from the applicability of Subpart TT.

7.7.5 Operational and Production Limits and Work Practices

For any process emission unit located in the PM₁₀ non-attainment areas designated in 35 IAC 212.324(a), the Permittee shall maintain and repair all air pollution control equipment in a manner that assures that the emission limits and standards in 35 IAC 212.324 shall be met at all times. Proper maintenance shall include the following minimum requirements, pursuant to 35 IAC 212.324(f):

- i. Visual inspection of air pollution control equipment;
- ii. Maintenance of an adequate inventory of spare parts; and
- iii. Expeditious repairs, unless the emission unit is shutdown.

7.7.6 Emission Limitations

See Section 10.1, Attachment 1 for unit specific emission limits.

7.7.7 Testing Requirements

None

7.7.8 Monitoring Requirements

None

7.7.9 Recordkeeping Requirements

The Permittee shall maintain the following records for maintenance and repair as required by 35 IAC 212.324(g):

- a. Written or electronic records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment;
- b. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state what corrective actions were taken and what repairs were made;
- c. A written or electronic record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated;
- d. Copies of records shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA; and
- e. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when the air pollution control equipment was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made.

7.7.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the emission limitations as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

If there is an exceedance of the emission limitations of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois 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.

7.7.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.7.12 Compliance Procedures

Compliance with the particulate matter limitations in this section is assured and achieved by the proper operation and maintenance of the filters as required by this section and the work-practices inherent in operation of the affected vegetable oil refinery.

7.8 Group 8: Consumer Foods Packaging (Best Foods)

7.8.1 Description

The Best Foods unit packages in consumer size containers corn oil, starch and corn syrup produced by the Germ, Dry Starch and Refinery Units.

7.8.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Equipment	Description/Date of Construction	Emission Control Equipment
Group 8	Consumer Foods Packaging (Best Foods)	Starch Silos, 1984	Dust Collectors
		Starch Processing, 1976 and 1984	Dust Collectors

7.8.3 Applicability Provisions and Applicable Regulations

- a. An "affected consumer foods packaging operation" for the purpose of these unit specific conditions is a processing and packaging of the final products.
- b. PM₁₀ emissions from this location are regulated by 35 IAC Part 212 Subpart N: "Food Manufacturing". Specifically, the following emission limits are established in 35 IAC 212.362(b) for specific emission units operated by the Permittee in the Village of Bedford Park west of Archer Avenue:

No person shall cause or allow the emission of PM₁₀, other than that of fugitive particulate matter, into the atmosphere to exceed the following limits during any one hour period:

45.8 mg/scm (0.02 gr/scf) for starch dust collecting systems.

- c. For all other emission units associated with the affected consumer foods packaging operation, emissions of PM₁₀ from each such unit shall not exceed 68.7 mg/scm (0.03 gr/scf) during any one hour period, pursuant to 35 IAC 212.324(b).
- d. The affected consumer foods packaging operations are subject to 35 IAC 212.321(b)(1), which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the

emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (See also Attachment 2) [35 IAC 212.321(a)].

7.8.4 Non-Applicability of Regulations of Concern

None

7.8.5 Operational and Production Limits and Work Practices

For any process emission unit located in the PM₁₀ non-attainment areas designated in 35 IAC 212.324(a), the Permittee shall maintain and repair all air pollution control equipment in a manner that assures that the emission limits and standards in 35 IAC 212.324 shall be met at all times. Proper maintenance shall include the following minimum requirements, pursuant to 35 IAC 212.324(f):

- i. Visual inspection of air pollution control equipment;
- ii. Maintenance of an adequate inventory of spare parts;
and
- iii. Expeditious repairs, unless the emission unit is shutdown.

7.8.6 Emission Limitations

None

7.8.7 Testing Requirements

None

7.8.8 Monitoring Requirements

None

7.8.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for the consumer foods packaging to demonstrate compliance with conditions of this permit, pursuant to Section 39.5(7)(b) of the Act:

a. The Permittee shall maintain the following records for maintenance and repair as required by 35 IAC 212.324(g):

- i. Written or electronic records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment;
- ii. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state what corrective actions were taken and what repairs were made;
- iii. A written or electronic record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated;
- iv. Copies of records shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA; and
- v. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when the air pollution control equipment was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made.

b. Material throughput, ton/month and ton/yr.

7.8.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the emission

limitations as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

If there is an exceedance of the emission limitations of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois 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.

7.8.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.8.12 Compliance Procedures

- a. Compliance with the particulate matter limitations in this section is assured and achieved by the proper operation and maintenance of the dust collectors as required by this section and the work-practices inherent in operation of the affected consumer foods packaging units.
- b. PM₁₀ emissions shall be calculated based on the following:

PM Emissions* = (Air flow, cfm) x (Estimated Dust Loading, gr/scf) x (1 lb/7,000 gr) x (60 minutes/hr) x [1 - (Dust Collector Efficiency (%)/100)].

- * As specified by the manufacturer or vendor of the filter, or air testing of the actual equipment, or testing of similar equipment at this or other facilities, or based on vendor or manufacturer outlet concentration guarantees or predicted outlet emission performance, or based on the standard EPA emission factors such as AP-42. If compliance testing has been conducted to determine mass emission rates, then the test data may be used in lieu of the above. Vendor outlet concentration guarantees and predicted performance, or experience with similar equipment, may be used in place the equation above.

7.9 Group 9: Utilities

7.9.1 Description

Natural gas/coal fired boilers and gas fired turbines are used to produce electricity and steam for manufacturing needs.

7.9.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Equipment	Description/Date of Construction	Emission Control Equipment
Group 9	Utilities	Coal fired Boilers #1, #2, and #3 (Each Greater Than 250 mmBtu/hr), Pre-1972	Electrostatic Precipitators
		Natural Gas-Fired Boilers #4 and #5 (312.5 mmBtu/hr each), Pre-1972	None
		Natural Gas-Fired Boiler #6 (600 mmBtu/hr) with Low NO _x Burners and Flue Gas Recirculation, 1992	Low NO _x Burner and Flue Gas Recirculation
		Two Natural Gas-Fired Turbines (65 mmBtu/hr each), 1995	None

7.9.3 Applicability Provisions and Applicable Regulations

- a. An "affected utility unit" for the purpose of these unit specific conditions is a natural gas/coal fired boiler or a turbine used for production of electricity and steam for manufacturing needs.
- b. Coal Fired Boilers #1, #2, and #3:
 - i. Coal fired boilers #1, #2, and #3 shall not exceed 0.15 kg of particulate matter per MW-hr of actual heat input in any one hour period (0.10 lbs/mmBtu/hr) pursuant to 35 IAC 212.201.
 - ii. On November 18, 1983 the Illinois Pollution Control Board adopted the Petition for an Alternative Standard for sulfur dioxide emission limits for Corn Products International, Inc. This petition was submitted by the Permittee in accordance with 35 IAC 214.201. Pursuant to the adopted

Alternative Standard, emissions from coal fired boilers #1, #2, and #3 shall not exceed 6.0 pounds of sulfur dioxide per mmBtu of actual heat input.

- iii. No person shall allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air [35 IAC 216.121].
- iv. Coal fired boilers #1, #2, and #3 shall not exceed 1.39 kg/MW-hr (0.9 lbs/mmBtu) of nitrogen oxides pursuant to 35 IAC 217.141(b).
- v. Coal fired boilers #1, #2, and #3, shall not exceed and shall be determined as 0.43 lbs * % S. of sulfuric acid per ton of coal burned and 0.15 lbs of hydrogen fluoride per ton of coal burned as determined by AP-42

c. Natural Gas-Fired Boiler #6:

- i. An affected boiler #6 shall not exceed 0.10 of nitrogen oxides per mmBtu of heat input for low heat release pursuant to 40 CFR 60.44b(a).
- ii. No person shall allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air [35 IAC 216.121].
- iii. The Illinois EPA has determined that the construction of boiler #6 complies with Prevention of Significant Deterioration of Air Quality Regulations (PSD), 40 CFR 52.21 by utilizing Best Available Control Technology (BACT) to control NO_x and CO emissions.

d. Natural Gas-Fired Boilers #4 and #5:

- i. No person shall allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air [35 IAC 216.121].

- ii. Natural gas fired boilers #4 and #5 shall not exceed 1.39 kg/MW-hr (0.3 lbs/mmBtu) of nitrogen oxides pursuant to 35 IAC 217.141(a).

e. Gas Turbines:

- i. Pursuant to 40 CFR 60.332 (a)(2), no owner or operator of an affected gas turbine shall cause to be discharged into the atmosphere from such gas turbine any gases which contain nitrogen oxides in excess of:

$$STD = 0.0150 \frac{(14,4)}{Y} + F$$

Where:

STD - Allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y - Manufacturer's rated heat rate at manufacturer's peak load (kilojoules per watt hour), or actual measured heat rate based on lower heater value of fuel as measured at actual peak load for the turbine. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F - NO_x emissions allowance for fuel-bound nitrogen calculated from the nitrogen content of the fuel as follows:

Fuel-Bound Nitrogen (Percent by Weight)	F (NO _x Percent by Volume)
N ≤ 0.015	0
0.015 < N ≤ 0.1	0.04 (N)
0.1 < N ≤ 0.25	0.004 + 0.0067 (N-0.1)
N > 0.25	0.005

Where:

N - The nitrogen content of the fuel (percent by weight) determined in Condition 7.9.8

- ii. The Permittee shall comply with one of the following emission limits for sulfur dioxide, pursuant to 40 CFR 60.333:

- A. The Permittee shall not discharge into the atmosphere from affected gas turbines any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.
 - B. The Permittee shall not burn in the affected gas turbines any fuel which contains sulfur in excess of 0.8 percent by weight.
- iii. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 218.302, 218.303, or 218.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC Part 218 Subpart G shall only apply to photochemically reactive material [35 IAC 218.301].
- f. Malfunction and Breakdown Provisions

In the event of a malfunction or breakdown of an affected boilers # 1, #2, and #3, including the coal pulverizer, the ash removal system, and the electrostatic precipitator, the Permittee is authorized to continue operation of the affected boilers in violation of the applicable requirements of Conditions 7.9.3(b) (c) and (d), as necessary to provide essential service, prevent risk of injury to personnel or severe damage to equipment, or if shutting down the boiler would lead to a greater amount of emissions during subsequent startup than would be caused by continuing to run the boiler for a short period until repairs can be made. This authorization is subject to the following requirements:

- i. Upon occurrence of excess emissions due to malfunction or breakdown, the Permittee shall as soon as practicable repair the affected boiler(s) or remove the boiler(s) from service, so that excess emissions cease. This shall be accomplished within 24 hours or noon of the Illinois EPA's next business day, whichever is greater, unless the Permittee obtains an extension from the Illinois EPA. The Illinois EPA may grant such extension if the Permittee demonstrates that the affected

boiler(s) could not be reasonably repaired or removed from service within the allowed time and that, based on the actions which have been taken and will be taken, the Permittee is taking reasonable steps to minimize excess emissions and will repair the affected boiler(s) or remove it from service as soon as practicable.

- ii. The Permittee shall fulfill all applicable recordkeeping and reporting requirements of Conditions 7.9.9 and 7.9.10.
- iii. Following notification to the Illinois EPA of a malfunction or breakdown with excess emissions, the Permittee shall comply with all reasonable directives of the Illinois EPA with respect to such incident, pursuant to 35 IAC 201.263.

g. Startup Provisions

The Permittee is authorized to operate the affected boiler(s) in violation of the applicable limits of Conditions 7.9.3(b) (c) and (d) during startup pursuant to 35 IAC 201.262, as the Permittee has affirmatively demonstrated that all reasonable efforts have been made to minimize startup emissions, duration of individual startups and frequency of startups. This authorization is subject to the following requirements:

- i. This authorization only extends for a period of up to 10 hours following initial firing of fuel during each startup event. This limitation shall not apply when extended low temperature operation of the boiler is necessary for replacement refractory curing or other required maintenance activities.
- ii. The Permittee shall conduct startup of the affected boiler(s) in accordance with the manufacturer's written or electronic instructions or other written or electronic instructions maintained on the site that are specifically developed to minimize excess emissions from both "cold" and "hot" startups and that include, at a minimum, the following measures:

- A. Review of the operational condition of the affected boiler(s) prior to initiating startup of the boiler;

Note: Corn Products International does not have physical capability to burn gas and does not have oil burners, only igniters which would result in poor combustion and from which soot would foul the ESPs. Using the oil igniters to "warm" the boiler up prior to introducing coal is not part the manufacturer's recommended startup procedures.

- B. Periodic review of the operating parameters of the affected boiler(s) during each startup accompanied by appropriate adjustments to the startup to reduce or eliminate excess emissions; and
- C. Timely energization of the electrostatic precipitator(s) as soon as this may be safely accomplished without damage or risk to personnel or equipment.

7.9.4 Non-Applicability of Regulations of Concern

For coal fired boilers #1, #2, and #3 the emission standard for sulfur dioxide emissions established 35 IAC 214.141 is not applicable because an Alternative Emission Standard was established by Illinois Pollution Control Board on November 18, 1983.

7.9.5 Operational and Production Limits and Work Practices

a. Natural Gas-Fired Boilers #4, #5, and #6:

- i. Only natural gas shall be used as a fuel for boilers #4, #5, and #6.
- ii. Emissions of nitrogen oxides from boiler #6 shall be controlled by the use of low NO_x burners and flue gas recirculation.
- iii. Emissions of carbon monoxide (CO) from boiler #6 shall be controlled by good combustion techniques.
- iv. The maximum firing rate of boiler #6 shall not exceed 600 mmBtu/hr.

b. Gas Turbines:

- i. The firing rate of each turbine shall not exceed 65 million Btu per hour, lower heating value (mmBtu/hr).
- ii. The operating hours for each turbine shall not exceed 5,500 hours per year.
- iii. The total natural gas consumption of the two turbines combined shall not exceed the following limits:

Natural Gas Consumption	
<u>(mmcf/day)</u>	<u>(mmcf/year)</u>
3.1	542.5

7.9.6 Emission Limitations

The affected utility units shall not exceed the following limits:

a. Natural Gas-Fired Boiler #6:

CO		PM*		VOM		NO _x		SO ₂	
(Lb/hr) (T/yr)		(Lb/hr) (T/yr)		(Lb/hr) (T/yr)		(Lb/hr) (T/yr)		(Lb/hr) (T/yr)	
72.0	315	3.0	13.1	0.8	3.7	30.0	131.4	0.4	1.6

* Filterable particulate matter

These limitations were established in the Construction Permit 91020069. These limits ensure that the construction and/or modification addressed in the aforementioned Construction Permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 Prevention of Significant Deterioration of Air Quality Regulations (PSD) of 40 CFR 52.21 [T1].

b. Gas Turbines (Total):

CO		PM		VOM		NO _x		SO ₂	
(Lb/hr) (T/yr)		(Lb/hr) (T/yr)		(Lb/hr) (T/yr)		(Lb/hr) (T/yr)		(Lb/hr) (T/yr)	
35.12	80.4	5.44	11.5	0.46	0.96	13.00	24.8	0.1	0.22

These limitations were established in Construction Permit 95030156. These limits ensure that the

construction and/or modification addressed in the aforementioned Construction Permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].

7.9.7 Testing Requirements

- a. Upon reasonable request from the Illinois EPA or USEPA, emissions of nitrogen oxides and sulfur dioxide from the gas turbines shall be measured in accordance with requirements of 40 CFR 60.335.
- b. Upon reasonable request from the Illinois EPA or USEPA, emissions of nitrogen oxides from natural gas fired boiler #6 shall be measured in accordance with requirements of 40 CFR 60.46b.

7.9.8 Monitoring Requirements

a. Gas Turbines

The affected gas turbines are subject to the NSPS for Stationary Gas Turbines, 40 CFR 60 Subparts A and GG, because the heat input at peak load is equal to or greater than 10.7 gigajoules per hour (10 mmBtu/hr), based on the lower heating value of the fuel fired and the gas turbines commenced construction, modification, or reconstruction after October 3, 1977, and has a peak load less than or equal to 107.2 gigajoules per hour (100 mmBtu/hr). The Illinois EPA administers the NSPS for subject sources in Illinois pursuant to a delegation agreement with the USEPA.

- i. The Permittee shall monitor the sulfur content and nitrogen content of the fuel being fired in the turbines on a daily basis in accordance with the provision of 40 CFR 60.334.
- ii. The Illinois EPA will consider a custom schedule for monitoring sulfur and nitrogen content of fuel (natural gas) in accordance with 40 CFR 60.334(b)(2).

For pipeline quality natural gas, the values may be determined and recorded semiannually. This determination is made by the Illinois EPA acting pursuant to an agreement with USEPA for delegation of authority to the Illinois EPA. This provision establishes a custom schedule for these determinations, which supercedes

the requirement for daily determination and is based on the Illinois EPA's finding that pipeline quality natural gas has a consistent sulfur and nitrogen content [40 CFR 60.334(b) (2)].

b. Natural Gas-Fired Boiler #6

The Permittee shall operate a flow metering device and a continuous emissions monitoring systems (CEMS) to monitor and record the following in accordance with the provisions of 40 CFR 60.48b:

- i. Natural gas consumption.
- ii. Nitrogen oxide emissions discharged to the atmosphere as required by the applicable parts of 40 CFR Part 60.

c. Coal Fired Boilers #1, #2, and #3:

Pursuant to 35 IAC 201.401(a)(1)(A) the Permittee shall install, operate, calibrate and maintain continuous monitoring equipment for the measurement of opacity from affected coal fired boilers. For the purpose of this requirement, a single monitoring system may be operated for a point in a stack which is common to a pair of affected boilers.

- i. This monitoring equipment shall be operated pursuant to written or electronic monitoring procedures that include a quality assurance/control plan, which procedures shall reflect the manufacturer's instructions as adopted by the Permittee based on its experience;
- ii. This monitoring equipment shall meet the performance specifications and operating requirements in Sections 3.1 through 3.8 of 40 CFR 51, Appendix P (1987; and
- iii. Notwithstanding the above, monitoring pursuant to 35 IAC 201.401 is not applicable during any period of a monitoring system or device malfunction if the Permittee demonstrates that the malfunction was unavoidable and is being repaired as expeditiously as practicable, pursuant to 35 IAC 201.404.

7.9.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for the affected utility units to demonstrate compliance with conditions of this permit, pursuant to Section 39.5(7)(b) of the Act:

- a. Natural Gas-Fired Boiler #6:
 - i. Natural gas consumption (mmscf/day and mmscf/yr);
 - ii. Emissions of regulated air pollutants calculated based on compliance procedure established in Condition 7.9.12;
 - iii. Records of maintenance, calibration and operational activity associated with continuous monitoring equipment; and
 - iv. Hours of operation (hours/day and hours/year).
- b. Gas Turbines:
 - i. Operating hours of each turbine (hours/month and hours/year);
 - ii. Natural gas consumption by each turbine (scf/day and scf/year); and
 - iii. Emissions of regulated air pollutants calculated based on compliance procedure established in Condition 7.9.12.
- c. Natural Gas-Fired Boilers #4 and #5:
 - i. Natural gas consumption, totally or for each boiler, in scf/mo and scf/year; and
 - ii. Operating hours of each boiler (hours/mo and hours/year).
- d. Coal Fired Boilers #1, #2, and #3:
 - i. Total operating hours (hours/month and hours/year) for each affected coal fired boiler;
 - ii. Amount of coal consumed (tons/month and tons/year) and records for sulfur content (wt.

%) in the coal received. Mine analysis of the coal supplied to the Permittee may be used to satisfy coal sampling requirements, provided that sampling and analysis follow ASTM methods; and

- iii. Pursuant to 35 IAC 201.407, the Permittee shall maintain records for the opacity monitoring system on each affected boiler that as a minimum shall include:
 - A. Opacity measurements.
 - B. Continuous monitoring system performance testing measurements.
 - C. Performance evaluations and other quality assurance/control activities.
 - D. Calibration checks.
 - E. Maintenance and adjustment performed.
 - F. Periods when the monitor was inoperative, with date, time and reason.
 - G. Quarterly reports submitted in accordance with Condition 7.9.10.
- e. Records for Startups:
 - i. Records of the source's established startup procedures for affected boilers; and
 - ii. Records for each startup of an affected boiler that results in excess of opacity or regulated air pollution emissions.
- f. Records for Continued Operation during Malfunctions and Breakdowns:
 - i. A maintenance and repair log for each affected boiler and associated control equipment, listing each activity performed with date; and
 - ii. Records for each incident when operation of an affected boiler continued during malfunction or breakdown, including the following information:

- A. Date and duration of malfunction or breakdown.
- B. A description of the malfunction or breakdown.
- C. The corrective actions used to reduce the quantity of emissions and the duration of the incident.
- D. If excess emissions occurred for four or more hours:

An explanation why continued operation of the affected boiler was necessary.

The preventive measures planned or taken to prevent similar malfunctions or breakdowns or reduce their frequency and severity.

An estimate of the magnitude of excess emissions during the incident.

7.9.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the emission limitations as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

a. Natural Gas-Fired Boiler #6:

The Permittee shall submit a quarterly report containing the information required under 40 CFR 60.49b(i). All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter [40 CFR 60.49b(i)]. The semi-annual monitoring report submission requirement in 8.6.1 is waived in favor of the above more frequent reporting requirement.

b. Coal Fired Boilers #1, #2, and #3:

Pursuant to 35 IAC 201.405, the owner or operator of the source subject to the continuous monitoring requirements shall report the following information on a quarterly basis:

- i. For periods of emissions in excess of any emission limitations established by this section:
 - A. The starting date and time of the excess emissions;
 - B. The duration of the excess emissions;
 - C. The magnitude of excess emissions;
 - D. The cause of the excess emissions, if known;
 - E. Corrective actions and actions taken to lessen the emissions;
 - F. The operating status of the monitoring system, including the dates and times of any periods during which it was inoperative; and
 - G. Other information, including but not limited to, monitoring location, monitoring maintenance records and operating hours.
 - ii. For opacity measurements, the report shall be based on six-minute averages of opacity and contain:
 - A. The percent opacity for each continuous opacity excess period; and
 - B. The start and stop time in six minute increments of any opacity measurements in excess of the limits established by this permit.
 - iii. If there were no excess emissions during the reporting period, the report shall so state and include information about the operating status of the monitoring equipment during that period.
 - iv. Reports shall be submitted within 45 days of the end of every calendar quarter.
- c. If there is an exceedance of the emission limitations of this permit as determined by the records required by this permit, the Permittee shall submit a report to

the Illinois EPA's Compliance Section in Springfield, Illinois 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.

7.9.11 Operational Flexibility/Anticipated Operating Scenarios

- a. For purposes of avoiding interruption of steam and heat supply due to malfunction and temporary shutdown of the primary coal fired boilers #1, #2, and #3 and natural gas fired boilers #4-#6, the following boilers are allowed to operate temporarily at this location during all necessary repair service being performed on the primary boilers:
 - i. When one or more coal boilers, or any 2 gas boilers are out of service: natural gas fired boilers with the actual heat input of each boiler limited to 83.5 mmBtu/hr and a total heat input limited to 250.5 mmBtu/hr.
 - ii. When one or more coal boilers are out of service: #2 fuel oil fired boilers with the actual heat input of each boiler limited to 30.0 mmBtu/hr.
- b. Amount of fuels consumed by these boilers shall not exceed the following limits:
 - i. Natural gas: 63 mmscf/mo for each boiler.
 - ii. Fuel oil #2 (total): 181,835 gal/mo.
- c. The Permittee has to immediately inform the Illinois EPA about proposed installation of the temporary boiler(s) along with construction application for this project. Such application shall reflect the limitations established in conditions listed above and demonstration of compliance with 40 CFR 52.21 and 40 CFR 60, Subpart Dc.
- d. For the purposes of maintaining plant air compressors and avoiding loss of instrument air to critical plant systems, the Permittee is authorized to utilize temporary diesel air compressors as shown in application 96010009, during emergencies or maintenance. This is considered to be an

insignificant activity under 35 IAC 201.210(a)(16) and 35 IAC 201.210(b)(29).

7.9.12 Compliance Procedures

- a. Compliance with the opacity limitation of Condition 5.2.2(b) is addressed by the continuous opacity monitoring system for coal fired boilers #1, #2, and #3.
- b. Compliance with PM emission limitations of Condition 7.9.3(b)(i) for coal fired boilers #1, #2, and #3 is achieved by the operation of electrostatic precipitators.
- c. Compliance with CO, NO_x and SO₂ limitations for all boilers and turbines are achieved by inherent operation of affected fuel combustion emission units. Compliance with the nitrogen oxides standard for boiler #6 is determined in accordance with the applicable method in 40 CFR 60.46b(e)(3).
- d. Compliance with emission limitations of Condition 7.9.6(a) for boiler #6 shall be based on the recordkeeping requirements in Condition 7.9.9 and the emission factors and formulas listed below:

i. AP-42 Emission Factors

<u>Pollutant</u>	Natural Gas Emission Factors (lb/mmBtu)
PM ₁₀ , Filterable	0.00186
SO ₂	0.000588
VOM	0.005392

Emissions (lb) = actual firing rate multiplied by the appropriate emission factor listed above.

ii. Manufacturer's Guarantee Emission Factors

<u>Pollutant</u>	Natural Gas Emission Factors (lb/mmBtu)
NO _x	0.05
CO	0.12

Emissions (lb) = actual firing rate multiplied by the appropriate emission factor and hours of operation.

- e. Compliance with emission limitations of Condition 7.9.6(b) for the turbines shall be based on the recordkeeping requirements in Condition 7.9.9 and the emission factors and formulas listed below:

- i. AP-42 Emission Factors

<u>Pollutant</u>	Natural Gas Emission Factors (lb/mmBtu)
PM ₁₀ , Filterable	0.0193
SO ₂	0.0006

Emissions (lb) = actual firing rate multiplied by the appropriate emission factor listed above.

- ii. Manufacturer's Emission Factors

<u>Pollutant</u>	Natural Gas Emission Factors (lb/mmBtu)
NO _x	0.09
CO	0.264
VOM	0.00315

Emissions (lb) = actual firing rate multiplied by the appropriate emission factor.

7.10 Group 10: Fly Ash Processing Units

7.10.1 Description

Fly ash (by-product of coal burning) is transferred from hoppers to the primary collector where it drops through air locks into the fly ash storage silo. Displaced air from the fly ash storage silo is filtered through the bin vent dust filter. Exhaust air from the primary collector is routed through the hydrovac dust filter and then into the water recirculation tank. Stored fly ash is eventually loaded out wet to trucks by mixing with water in the hydromix conditioner located under the fly ash storage silo. Boiler bottom ash is slurried to the hydrobin water decant tank where it is subsequently loaded out wet to trucks. Water separated from the bottom ash in the hydrobin decant tank is returned to the hydrovac water recirculation tank.

7.10.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Equipment	Description	Emission Control Equipment
Group 10	Fly Ash Processing Units	Primary Collector Cyclone	Hydrovac Dust Filter and Water Recirculation Tank
		Fly Ash Storage Silo	Bin Vent Filter
		Date of Construction: Prior to 1972	

7.10.3 Applicability Provisions and Applicable Regulations

- a. An "affected fly ash processing unit" for the purpose of these unit specific conditions is equipment for storage and transfer of fly ash.
- b. Each affected fly ash processing unit is subject to the PM₁₀ emissions limitation established in 35 IAC 212.324(b) and shall not exceed 68.7 mg/scm (0.03 gr/scf) during any one hour period.
- c. The affected fly ash processing equipment is subject to 35 IAC 212.322(b)(1), which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any existing process

emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced prior to April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (See also Attachment 2) [35 IAC 212.322(a)].

7.10.4 Non-Applicability of Regulations of Concern

None

7.10.5 Operational and Production Limits, and Work Practices

For any process emission unit located in the PM₁₀ non-attainment areas designated in 35 IAC 212.324(a), the Permittee shall maintain and repair all air pollution control equipment in a manner that assures that the emission limits and standards in 35 IAC 212.324 shall be met at all times. Proper maintenance shall include the following minimum requirements, pursuant to 35 IAC 212.324(f):

- a. Visual inspection of air pollution control equipment;
- b. Maintenance of an adequate inventory of spare parts; and
- c. Expeditious repairs, unless the emission unit is shutdown.

7.10.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide limitations in Condition 5.5.1, this equipment is subject to the following:

None

7.10.7 Testing Requirements

None

7.10.8 Monitoring Requirements

None

7.10.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for this equipment to demonstrate compliance with Conditions 5.5.1 and 7.3.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Recordkeeping of maintenance and repair [35 IAC 212.324(g)]:
 - i. Written or electronic records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment.
 - ii. The owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state what corrective actions were taken and what repairs were made.
 - iii. A written or electronic record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated.
 - iv. Copies of all maintenance and repair records shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA.
 - v. Upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when the air pollution control equipment was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made.

- b. Total amount of fly ash produced/processed, tons/month and tons/year.
- c. Monthly and annual emissions of PM₁₀ calculated in accordance with compliance procedures established in Condition 7.10.12.

7.10.10 Reporting Requirements

Compliance Section of non-compliance with the emission limitations and emissions of PM₁₀ as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

If there is an exceedance of the emission limitation of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois 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.

7.10.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.10.12 Compliance Procedures

- a. Compliance with the particulate matter limitations in this section is assured and achieved by the proper operation and maintenance of the pollution control equipment and the work-practices inherent in operation of the affected fly ash processing unit.
- b. For purposes of calculation PM₁₀ emissions from the affected fly ash processing units, the following equation shall be used:

$$\text{PM}_{10} \text{ Emissions}^* = (\text{Air flow, cfm}) \times (\text{Estimated Dust Loading, gr/scf}) \times (1 \text{ lb}/7,000 \text{ gr}) \times (60 \text{ minutes/hr}) \times [1 - (\text{Filter Efficiency} (\%)/100)].$$

- * As specified by the manufacturer or vendor of the filter, or air testing of the actual equipment, or testing of similar equipment at this or other facilities, or based on vendor or manufacturer outlet concentration guarantees or predicted outlet emission

performance, or based on the standard EPA emission factors such as AP-42. If compliance testing has been conducted to determine mass emission rates, then the test data may be used in lieu of the above. Vendor outlet concentration guarantees and predicted performance, or experience with similar equipment, may be used in place the equation above.

7.11 Fugitive Emissions

7.11.1 Description

Fugitive emissions at this source are from operations and emission units listed below.

7.11.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Unit 11	Process Spills and General Equipment Leaks	----
	Railcar Losses	----
	Bottom Ash Slurry Handling	
	Coal Crushing	
	Paved and Unpaved Plant Roads	
	Cooling Towers, Particulate Emissions	
	Occasional Bulk Unloading, Bag and Other Container Handling	
	Starch Reprocessing Loadout	

7.11.3 Applicability Provisions and Applicable Regulations

- a. The "affected fugitives emissions" for the purpose of these unit-specific conditions, are the fugitives described in Conditions 7.11.1 and 7.11.2.
- b. The affected fugitives are subject to the emission limits identified in Condition 5.2.2 and the following limits and requirements established in 35 IAC 212.316:
 - i. Emission Limitation for Crushing and Screening Operations. No person shall cause or allow fugitive particulate matter emissions generated by the crushing or screening of slag, stone, coke or coal to exceed an opacity of 10 percent.
 - ii. Emission Limitations for Roadways or Parking Areas. No person shall cause or allow fugitive particulate matter emissions from any roadway or parking area to exceed an opacity of 10 percent, except that the opacity shall not exceed 5 percent at quarries with a capacity to produce more than 1 million ton/yr of aggregate.

- iii. Emission Limitations for Storage Piles. No person shall cause or allow fugitive particulate matter emissions from any storage pile to exceed an opacity of 10 percent, to be measured four ft from the pile surface.
- iv. Emission Limitation for All Other Emission Units. Unless an emission unit has been assigned a particulate matter, PM₁₀, or fugitive particulate matter emissions limitation elsewhere in 35 IAC 212.316 or in 35 IAC Part 212 Subparts R or S, no person shall cause or allow fugitive particulate matter emissions from any emission unit to exceed an opacity of 20 percent.

7.11.4 Non-Applicability of Regulations of Concern

N/A

7.11.5 Operational and Production Limits and Work Practices

N/A

7.11.6 Emission Limitations

None

7.11.7 Testing Requirements

None

7.11.8 Monitoring Requirement

None

7.11.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected fugitives to demonstrate compliance with 7.11.3, pursuant to Section 39.5(7)(b) of the Act:

- a. The owner or operator of any fugitive particulate matter emission unit subject to 35 IAC 212.316 shall keep written records of the application of control measures as may be needed for compliance with the opacity limitations and shall submit to the Illinois EPA an annual report containing a summary of such information.

- b. The records required under this subsection shall include at least the following:
 - i. The name and address of the source;
 - ii. The name and address of the owner and/or operator of the source;
 - iii. A map or diagram showing the location of all emission units controlled, including the location, identification, length, and width of roadways;
 - iv. For each application of water or chemical solution to roadways by truck: the name and location of the roadway controlled, application rate of each truck, frequency of each application, width of each application, identification of each truck used, total quantity of water or chemical used for each application and, for each application of chemical solution, the concentration and identity of the chemical;
 - v. For application of physical or chemical control agents: the name of the agent, application rate and frequency, and total quantity of agent and, if diluted, percent of concentration, used each day; and
 - vi. A log recording incidents when control measures were not used and a statement of explanation.

7.11.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected fugitives with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. Copies of all records required by this Section shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA and shall be transmitted to the Illinois EPA by a company-designated person with authority to release such records.

- b. A quarterly report shall be submitted to the Illinois EPA stating the following: the dates any necessary control measures were not implemented, a listing of those control measures, the reasons that the control measures were not implemented, and any corrective actions taken. This information includes, but is not limited to, those dates when controls were not applied based on a belief that application of such control measures would have been unreasonable given prevailing atmospheric conditions, which shall constitute a defense to the requirements of this Section. This report shall be submitted to the Illinois EPA thirty (30) calendar days from the end of a quarter. Quarters end March 31, June 30, September 30, and December 31 [35 IAC 212.316(g)].

7.11.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.11.12 Compliance Procedures

Compliance with the emission limits in Conditions 5.5 and 7.11.3 is assured and achieved by the proper operation and maintenance of the equipment as required by this section and the work-practices inherent in operation of the affected units.

8.0 GENERAL PERMIT CONDITIONS

8.1 Permit Shield

Pursuant to Section 39.5(7)(j) of the Act, the Permittee has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the Illinois EPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to the source, the Illinois EPA's written determination (or a concise summary thereof) is included in this permit.

This permit shield does not extend to applicable requirements which are promulgated after April 8, 2000 unless the permit has been modified to reflect such new requirements.

8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

8.3 Emissions Trading Programs

No permit revision shall be required for increases in emissions allowed under any USEPA approved economic incentives, marketable permits, emissions trading, or other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement. [Section 39.5(7)(o)(vii) of the Act]

8.4 Operational Flexibility/Anticipated Operating Scenarios

8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes that contravene express permit terms without applying for or obtaining an amendment to this permit, provided that [Section 39.5(12)(a)(i) of the Act]:

- a. The changes do not violate applicable requirements;
- b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements;
- c. The changes do not constitute a modification under Title I of the CAA;
- d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational changes; and
- e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:
 - i. Describe the physical or operational change;
 - ii. Identify the schedule for implementing the physical or operational change;
 - iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;
 - iv. Provide emission calculations which demonstrate that the physical or operational change will not result in modification; and
 - v. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other process, emissions, or composition parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

If monitoring is required by any applicable requirements or conditions of this permit, a report summarizing the required monitoring results, as specified in the conditions of this permit, shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

<u>Monitoring Period</u>	<u>Report Due Date</u>
January - June	September 1
July - December	March 1

All such reports shall be certified in accordance with Condition 9.9.

8.6.2 Test Notifications

Unless otherwise specified elsewhere in the permit or in an applicable regulation, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior the testing pursuant to Section 39.5(7)(a) of the Act. The notification shall include at a minimum:

- a. The name and identification of the affected unit(s);
- b. The person(s) who will be performing sampling and analysis and their experience with similar tests;
- c. 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 source and any control equipment will be determined;
- d. The specific determination of emissions and operation which are intended to be made, including sampling and monitoring locations;
- e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;

- f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and
- g. Any proposed use on an alternative test method, with detailed justification.

8.6.3 Test Reports

Unless otherwise specified elsewhere in the permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum:

- a. The name and identification of the affected unit(s);
- b. The date and time of the sampling or measurements;
- c. The date any analyses were performed;
- d. The name of the company that performed the tests and/or analyses;
- e. The test and analytical methodologies used;
- f. The results of the tests including raw data, and/or analyses including sample calculations;
- g. The operating conditions at the time of the sampling or measurements; and
- h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

8.6.4 Reporting Addresses

- a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:

- i. Illinois EPA - Air Compliance Section

Illinois Environmental Protection Agency (MC 40)
Division of Air Pollution Control
Compliance Section
P.O. Box 19276
Springfield, Illinois 62794-9276

ii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
Eisenhower Tower
1701 First Avenue
Maywood, Illinois 60153

iii. Illinois EPA - Air Permit Section (MC 11)

Illinois Environmental Protection Agency
Divisions of Air Pollution Control
Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

iv. USEPA - Air Branch

United States EPA (AR - 17J)
Air & Radiation Branch (Illinois - Indiana)
77 West Jackson Boulevard
Chicago, Illinois 60604

- b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 ("Title I Provisions") and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

9.0 STANDARD PERMIT CONDITIONS

9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in the permit and as allowed by law and rule. [Section 39.5(7)(j)(iv) of the Act]

9.1.2 In particular, this permit does not alter or affect the following:

- a. The provisions of Section 303 (emergency powers) of the Clean Air Act, including USEPA's authority under that Section;
- b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- c. The applicable requirements of the acid rain program consistent with Section 408(a) of the Clean Air Act; and
- d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the Clean Air Act.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of the permit. Any permit noncompliance constitutes a violation of the Clean Air Act and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application [Section 39.5(7)(o)(i) of the Act].

The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition. [Section 39.5(6)(c) of the Act]

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Environmental Protection Act or regulations promulgated thereunder.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto. [Section 39.5(7)(o)(vi)] The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois, 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, and after being allowed a reasonable opportunity to verify the legitimacy of credentials and other documents (including photocopying the documents that are presented), the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(p)(ii) of Act]:

- a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of the permit. EPA contractors must present documentation that a secrecy agreement is in effect with EPA prior to site entry;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control equipment), practices, operations regulated or required under the permit;
- d. Sample or monitor any substances or parameters at any location:
 - i. At reasonable times, for the purposes of assuring permit compliance; or
 - ii. As otherwise authorized by the CAA, or this Act.
- e. Obtain and remove samples of any discharge or emission of pollutants; and
- f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source. Illinois EPA representatives will follow all written plant safety rules, and will utilize only intrinsically safe or explosion proof flashlights, photographic, recording, monitoring, or other electronic devices in the germ processing extraction area, so as not to endanger Illinois EPA representatives, plant personnel, or plant property.

9.4 Obligation to Comply With Other Requirements

The issuance of this permit does not release the Permittee from applicable state and federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

9.5 Liability

9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the sources.

9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the source.

9.5.5 Property Rights

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

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes.

9.6.3 Retention of Records

- a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original

strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. [Section 39.5(7)(e)(ii) of the Act]

- b. Other records required by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Compliance Section no later than May 1 of the following year, as required by 35 IAC Part 254.

9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7)(p)(v) of the Act, the Permittee shall submit compliance certifications annually or more frequently as specified in the applicable requirement or by permit condition.

- a. The certification shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.
- b. All compliance certifications must be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.
- c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

Any document (including reports) required to be submitted by a CAAPP permit shall contain certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act [Section 39.5(7)(k) of the Act]. An example Certification by a Responsible Official is included as an attachment to this permit.

9.10 Defenses to Enforcement Action

9.10.1 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain

compliance with the conditions of this permit. [Section 39.5(7)(o)(ii) of the Act]

9.10.2 Emergency Provision

- a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operation logs, or other relevant evidence:
 - i. An emergency occurred as provided in Subsection 7(k) of Section 39.5 of the Act and the Permittee can identify the cause(s) of the emergency. Normally, an act of God such as lightning or flood is considered an emergency;
 - ii. The permitted source was at the time being properly operated;
 - iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working day of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and
 - iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in the permit.
- b. This provision is in addition to any emergency or upset provisions contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations.

9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless the permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is

removed from the permitted location(s), notwithstanding the expiration date specified on the permit.

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

The permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [Section 39.5(7)(o)(iii) of the Act]

9.12.2 Reopening and Revision

The permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

- a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;
- b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program;
- c. The Illinois EPA or USEPA determines that the permit contains a material mistake or inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of the permit; and
- d. The Illinois EPA or USEPA determines that the permit must be revised to ensure compliance with the applicable requirements of the Act.

9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation under Section 39.5(15)(a)(iii) of the Act.

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing

to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Illinois EPA copies of records required to be kept by the permit or, for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality. [Section 39.5(7)(o)(v) of the Act]

9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if the permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force. [Section 39.5(7)(i) of the Act]

9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions. [Section 39.5(5)(1) and (n) of the Act]

10.0 Attachments

10.1 Attachment 1: Emissions Limits Established in Permit 93010072. All construction activities under 93010072 are complete.

TABLE 1A

General Limits for Equipment
Particulate Matter Emissions

CP Designation	Emission Unit	Particulate Matter Emissions			
		Monthly Hours	Annual Hours	(Lb/Hr)	(Tons/Yr)
Argo 2-043	No. 1 Gluten Rotary Filter	744	8,550	0.1	0.43
Argo 2-043	No. 2 Gluten Rotary Filter	744	8,550	0.1	0.43
Argo 2-043	No. 3 Gluten Rotary Filter	744	8,550	0.1	0.43
Argo 2-043	No. 4 Gluten Rotary Filter	744	8,550	0.1	0.43
Argo 2-043	No. 5 Gluten Rotary Filter	744	8,550	0.1	0.43
Argo 2-043	No. 6 Gluten Rotary Filter	744	8,550	0.1	0.43
Argo 2-043	No. 7 Gluten Rotary Filter	744	8,550	0.1	0.43
Argo 2-047	Corn Silo Handling w/Filter	744	8,736	0.15	0.66
Argo 2-054	Pellet Cooler System with				
	Scrubber No.1	744	8,550	4.25	18.17
	Scrubber No.2	744	8,550	4.25	18.17
	Scrubber No.3	744	8,550	3.50	<u>14.97</u>
			Subtotal		54.98

TABLE 1A (Continued)

General Limits for Equipment
Particulate Matter Emissions

Original Permit	CP Designation	Emission Unit	Monthly Hours	Annual Hours	Particulate Matter Emissions	
					(Lb/Hr)	(Tons/Yr)
86060049	Argo 2-029G	Gluten Cooler w/Scrubber	744	8,550	7.58	32.41
86060049	Argo 2-030G	Gluten Transport w/Filter	744	8,550	1.095	4.68
72100494	A-25-005	Dust Collecting w/Filter	744	8,736	1.31	5.70
72110645	A-27-086	"B" Starch Dryer w/Scrubber	744	8,520	6.60	28.10
72110646	A-27-003	"A" Starch Dryer w/Scrubber	744	8,520	8.54	36.35
75020111	A-25-117A	Starch Transport #1	744	8,736	0.58	2.51
75020111	A-25-117C	Starch Transport #3 Silo	744	8,736	0.36	1.56
75020112	A-27C-118	"C" Starch Dryer w/Scrubber-S.	744	8,520	***	***
75020112	A-27C-118	"C" Starch Dryer w/Scrubber-N.	744	8,520	***	***
		*** Total Emissions for "C" Starch Dryer			13.27	56.53
75020113	A-25-119	Starch Truck Loading w/Filter	744	8,736	0.24	1.05
86060049	Argo 2-033G	Gluten Dust System w/Filter	744	8,550	1.37	5.83
86060049	Argo 2-037	System Dust with Filter 1	744	8,550	0.466	1.99
		System Dust with Filter 2	744	8,550	0.466	1.99
72110133	A-48-075	"D" Sugar Dryer w/Scrubber	744	8,550	1.40	5.94
75110097	A-48-113	"C" Sugar Dryer w/Scrubber	744	8,550	0.42	1.79
89030067	A-48-123	"A" Sugar Dryer w/Scrubber	744	8,550	1.28	5.43
85050003	Argo 2-001	"E" Sugar Dryer w/Scrubber	744	8,550	1.21	5.15
75110093	A-01B-104G	Existing Rail Unloading with Cyclone	744	8,736	5.14	22.45
86060049	Argo 2-027G	Germ, Gluten & Feed Drying w/Scrubbers & Oxidizer/Burner				
91030008		Main Exhaust Line No.1 *	744	8,550	***	***
93070113		Main Exhaust Line No.2 *	744	8,550	***	***
		***Combined Emissions of Main Exhaust Line 1 & 2			17.62	75.31
		Secondary Exhaust No.1 **	500	500	10.84	2.71
		Secondary Exhaust No.2 **	500	500	10.84	2.71
		Total				300.2

* Total, for the combination of the discharge from the gluten dryer scrubber and the discharge to the balance stack, if any.

** Total, when discharge occurs through the direct Stage 1/Stage 2 scrubber exhaust. (Either one or both scrubbers must be operating as required by Condition 3(c)(ii)(B)).

These limits represent emissions of particulate matter from existing source units that include slight increases due to increased hours of operation and increased flow rates.

TABLE 1B

Particulate Matter Emission Reductions

<u>CP Designation</u>	<u>Emission Unit</u>	<u>Current Emissions (Tons/Year)*</u>	<u>Revised Limits (Tons/Year)**</u>	<u>Particulate Matter Reductions (Tons/Year)</u>	<u>Description of Change</u>
A-48-075	"D" Sugar Dryer Scrubber	7.02	5.94 ⁺	- 1.08 ⁺	Change Scrubber Liquor
A-48-113	"C" Sugar Dryer Scrubber	2.12	1.79 ⁺	- 0.33 ⁺	Change Scrubber Liquor
A-48-123	"A " Sugar Dryer Scrubber	6.45	5.43 ⁺	- 1.02 ⁺	Change Scrubber Liquor
Argo 2-001	"E" Sugar Dryer Scrubber	6.58	5.15 ⁺	- 1.43 ⁺	Change Scrubber Liquor
Argo 2-027	Dryer Cyclones to Atmosphere	12.79	0.0	- 12.79	Discharge Routed to New Scrubber (See 027G)
Argo 2-027	Heat Recovery Scrubbers (GHEs)	81.09	0.0	- 81.09	Discharge Routed to New Scrubber (See 027G)
Argo 2-034	Pellet Cooler No.1				
Argo 2-035	Pellet Cooler No.2 (sum of 34&35)	<u>77.42</u>	0.0	<u>- 77.42</u>	Discharge Routed to New Scrubber (See 054)
	TOTAL	193.47		- 175.16	

Notes:

* These emissions are prior to construction of the Grind Increase Project based on the average of 1992 and 1993 emissions.

** These emissions are after Phase I and II of the Grind Increase Project and based on AP-42 emission factors, stack test data, engineering estimates or manufacturer's guarantee.

These limits represent decreases in emissions of particulate matter from existing source units.

⁺ = Emission Reductions for Dextrose revised to reflect cancellation of commensurate emissions increases elsewhere in Phase II of the Grind Project [T1R]

TABLE 1C

General Limits for Equipment
Sulfur Dioxide Emissions

CP Designation	Emission Unit	Monthly Hours	Annual Hours	Sulfur Dioxide Emissions	
				(Lb/Hr)	(Tons/Yr)
Argo 2-043	Steepwater Evap Startup Jet	400	400	4.8	0.96
Argo 2-043	No.1 Gluten Rotary Filter	744	8,550	4.91	20.99
Argo 2-043	No.2 Gluten Rotary Filter	744	8,550	4.91	20.99
Argo 2-043	No.3 Gluten Rotary Filter	744	8,550	4.91	20.99
Argo 2-043	No.4 Gluten Rotary Filter	744	8,550	4.91	20.99
Argo 2-043	No.5 Gluten Rotary Filter	744	8,550	4.91	20.99
Argo 2-043	No.6 Gluten Rotary Filter	744	8,550	4.91	20.99
Argo 2-043	No.7 Gluten Rotary Filter	744	8,550	4.91	20.99
Argo 2-043	Gluten Filter Vacuum Pumps 1-5	744	8,550	4.77	20.4
Argo 2-043L	Wet Feed Mixing Conveyors	744	8,550	0.5	2.2
Argo 2-043	5% FOR PROJECT FUGITIVES		---		19.00
Argo 2-054	Pellet Cooler System with				
	Scrubber No.1	744	8,550	0.74	3.16
	Scrubber No.2	744	8,550	0.74	3.16
	Scrubber No.3	744	8,550	0.61	<u>2.61</u>
			Total		<u>198.42</u>

TABLE 1C (Continued)

General Limits for Equipment
Sulfur Dioxide Emissions

Original Permit	CP Designation	Emission Unit	Monthly Hours	Annual Hours	Sulfur Dioxide Emissions	
					(Lb/Hr)	(Ton/Yr)
86060049	Argo 2-029G	Gluten Cooler with Scrubber	744	8,550	1.10	4.70
86060049	Argo 2-030G	Gluten Transport with Filter	744	8,550	0.22	0.91
72110645	A-27-086	"B" Starch Dryer with Scrubber	744	8,520	1.00	4.26
72110646	A-27-003	"A" Starch Dryer with Scrubber	744	8,520	1.25	5.33
75020112	A-27C-118	"C" Starch Dryer with Scrubber-S.	744	8,520	***	***
75020112	A-27C-118	"C" Starch Dryer with Scrubber-N.	744	8,520	***	***
		*** Total Emissions for "C" Starch Dryer			2.00	8.52
86060049	Argo 2-037	Pellet System 1 with Filter	744	8,550	0.085	0.35
86060049	Argo 2-037	Pellet System 2 with Filter	744	8,550	0.085	0.35
86060049	Argo 2-027G	Germ Gluten and Feed Drying with Scrubbers				
		Main Exhaust Line No. 1*	744	8,550	***	***
		Main Exhaust Line No. 2*	744	8,550	***	***
		*** Combined Emissions of Main Exhaust Line 1 & 2			17.54	75.00
		Secondary Exhaust Line No. 1**	500	500	16.64	4.16
		Secondary Exhaust Line No. 2**	500	500	16.64	4.16
					Total	107.74

* Total, for the combination of the discharge from the gluten dryer scrubber and the discharge to the balance stack, if any.

** Total, when discharge occurs through the direct Stage 1/Stage 2 scrubber exhaust (either one or both scrubbers must be operating).

These limits represent emissions of sulfur dioxide from existing source units that include slight increases due to increased hours of operation and increased flow rates.

Table 1D
General Limits for Equipment
Organic Matter Emissions

CP Designation	Emission Unit Description	Monthly Hours	Annual Hours	VOM Emissions	
				(Lb/Hr)	(Tons/Yr)
A-27-003	Bldg 27A Starch Flash Dryer	744	8,520	6.80	14.31
A-27-086	Bldg 27B Starch Flash Dryer	744	8,520	5.20	11.06
A-27-118	Starch Flash Dryer C & Tanks	744	8,520	7.80	29.14
A-46-071	Bldg 46 Anhydrous Cerelose System	744	8,550	0.97	2.07
A-48-075	D Sugar Dryer Scrubber	744	8,550	3.25	6.94
A-48-113	C Sugar Dryer Scrubber	744	8,550	0.98	2.10
A-48-123	A Sugar Dryer Scrubber	744	8,550	2.97	6.35
Argo 2-001	E Sugar Dryer Scrubber	744	8,550	2.82	6.02
Argo 2-012	# 1 Melt Tank	744	8,736	0.23	0.51
Argo 2-013	# 2 Melt Tank	744	8,736	0.24	0.51
Argo 2-014	Dust Collecting System for Sugar Bulk Loading	744	8,736	0.89	1.96
Argo 2-015	House Dust Collecting System for Sugar Products	744	8,760	0.74	1.61
Argo 2-016	Dust Collecting Sys for Sugar Bagging Machines	744	8,736	0.45	0.99
Argo 2-041	B Sugar Dryer Scrubber	744	8,736	3.40	7.36
Argo 2-044D	Germ Processing - Wet Prep - Scrubber 86A15	744	8,550	3.99	6.68
Argo 2-044E	Germ Processing - Wet Prep - Scrubber 86A16	744	8,550	3.99	6.68
Argo 2-044F	Germ Processing - Wet Prep - Scrubber 86A17	744	8,550	3.99	6.68
Argo 2-044G	Germ Processing - Wet Prep - Scrubber 86A18	744	8,550	3.99	6.68
Argo 2-063	Ref Precoat Filter 1	744	8,760	0.77	1.35
Argo 2-063	Ref Precoat Filter 2	744	8,760	0.77	1.35
Argo 2-063	Ref Precoat Filter 3	744	8,760	0.77	1.35
Argo 2-063	Ref Precoat Filter 4	744	8,760	0.77	1.35
Argo 2-063	Ref Precoat Filter 5	744	8,760	0.77	1.35
Argo 2-063	Ref Precoat Filter 6	744	8,760	0.77	1.35
Argo 2-063	Ref Precoat Filter 7	744	8,760	0.77	1.35
Argo 2-063	Ref Precoat Filter 8	744	8,760	0.77	1.35
Argo 2-064	Precoat Filter Vacuum Pumps	744	8,760	4.77	8.71
Argo 2-027	Feed, Germ, and Gluten Drying/Cooling				
	Main Exhaust Line No. 1*	744	8,550	***	***
	Main Exhaust Line No. 2*	744	8,550	***	***
	*** Combined Emissions of Main Exhaust Line 1 & 2			15.52	66.31
	Secondary Exhaust Line No.1**		500	32.00	5.12
	Secondary Exhaust Line No.2**		500	32.00	5.12

Table 1D
General Limits for Equipment
Organic Matter Emissions

<u>CP Designation</u>	<u>Emission Unit Description</u>	<u>Monthly Hours</u>	<u>Annual Hours</u>	<u>VOM Emissions</u>	
				<u>(Lb/Hr)</u>	<u>(Tons/Yr)</u>
Argo 2-029	Gluten Cooler/scrubber	744	8,550	1.52	3.23
Argo 2-043A	Wet Mill Tanks to Vent Fan	744	8,760	2.30	5.00
Argo 2-043B	Gluten filter 1 (22S80)	744	8,550	2.20	4.68
Argo 2-043C	Gluten filter 2 (22S81)	744	8,550	2.20	4.68
Argo 2-043D	Gluten filter 3 (22S82)	744	8,550	2.20	4.68
Argo 2-043E	Gluten filter 4 (22S83)	744	8,550	2.20	4.68
Argo 2-043F	Gluten filter 5 (22S84)	744	8,550	2.20	4.68
Argo 2-043G	Gluten filter 6 (22S85)	744	8,550	2.20	4.68
Argo 2-043	Gluten filter 7 (22S109)	744	8,550	2.20	4.68
Argo 2-043H	Gluten Filter Vacuum Pumps	744	8,550	2.20	4.67
Argo 2-043L	Corn Feed Mixing Conveyors Vent Fan	744	8,760	0.16	0.33
Argo 2-054	Pellet Cooler #1, Scrubber 23S85	744	8,550	7.93	33.87
Argo 2-054	Pellet Cooler #2, Scrubber 23S86	744	8,550	7.93	33.87
Argo 2-054	Pellet Cooler #3, Scrubber 23S87	744	8,550	7.90	27.88
Argo 2-059	Molten Sulfur and Tanks Vent Scrubber	744	8,760	0.97	4.25
Argo 2-027/043Q	Start-up Steam Jet 11J04	400	400	1.68	0.26
A-70-155	Spray Tower	744	8,760	7.40	32.40
A-70-156	Acidulation	744	8,760	4.70	10.27

* Total, for the combination of the discharge from the gluten dryer scrubber and the discharge to the balance stack, if any.

** Total, when discharge occurs through the direct Stage 1/Stage 2 scrubber exhaust (either one or both scrubbers must be operating).

TABLE 1E
Sulfur Dioxide Emission Reductions

CP Designation	Emission Unit	Current Emissions (Tons/Year)*	Sulfur Dioxide Reductions (Tons/Year)**	Description of Change
Argo 2-043	Replace Fiber Belt Press w/Screw Presses	79.98	- 77.78	Replaced with Screw Presses (See 043)
Argo 2-034	Pellet Cooler No.1	5.02	- 5.02	Discharge Routed to Scrubber (See 054)
Argo 2-035	Pellet Cooler No.2			
Argo 2-043	Gas Heated Evap Ejector I	6.94	- 6.77	Discharge Routed to Scrubbers (See 027G)
Argo 2-043	Gas Heated Evap Ejector II	6.94	- 6.77	Discharge Routed to Scrubbers (See 027G)
Argo 2-043	Steepwater Finisher Ejector	2.60	- 2.53	Discharge Routed to Scrubbers (See 027G)
Argo 2-027	Dryer Cyclones to Atmosphere	66.35	- 66.35	Discharge Routed to Scrubbers (See 027G)
Argo 2-027	Current Cyclones to Heat Recovery Scrubbers (GHEs) as Primary Control	<u>115.48</u>	<u>- 115.48</u>	Discharge Routed to Scrubbers (See 027G)
Total		283.31	- 280.87	

* These emissions are prior to construction of the Grind Increase Project based on the average of 1992 and 1993 emissions.

** These emissions are after Phase I and II of the Grind Increase Project and based on AP-42 emission factors, stack test data, engineering estimates, or manufacturer's guarantee.

These limits represent decreases in emissions of sulfur dioxide from existing source units.

TABLE 1F

General Limits for Equipment - Fuel Combustion

Argo I.D.	Emission Unit	Monthly Hours	Annual Hours	NO _x		CO		VOM from Fuel Combustion	
				(Lb/Hr)	(Ton/Yr)	(Lb/Hr)	(Ton/Yr)	(Lb/Hr)	(Ton/Yr)
A-27-003	"A" Starch Dryer	744	8,520	1.98	8.44	1.655	7.06	**	**
A-27-086	"B" Starch Dryer	744	8,520	1.98	8.44	1.655	7.06	**	**
A-27C-118	"C" Starch Dryer	744	8,520	3.53	<u>15.04</u>	2.97	<u>12.65</u>	**	**
			Subtotal		31.92		26.77		
Argo 2-027G Gluten Dryer System									
	Line No.1*	744	8,550	1.56	6.67	2.27	9.70	**	**
	Line No.2*	744	8,550	1.56	<u>6.67</u>	2.27	<u>9.70</u>	**	**
			Total		45.26		46.17		

* Total, for any combination of operation of furnace and duct burner

** See Table 1D for Emission Limits

These limits are based on AP-42 emission factors for fuel combustion and vendor guarantees on gluten dryer system.

TABLE 1G

Net Change in Emissions - Fuel Combustion
At Time of Grind Increase Permit 93010072

Argo I.D.	Emissions Unit	NO _x (ton/year)			CO (ton/year)			VOM (ton/year)		
		Current Emissions	Revised Limit	Net Change	Current Emissions	Revised Limit	Net Change	Current Emissions	Revised Limit	Net Change
A-27-003	"A" Starch Dryer	9.95	11.65	1.70	2.49	2.91	0.42	**	**	**
A-27-086	"B" Starch Dryer	9.95	11.65	1.70	2.49	2.91	0.42	**	**	**
A-27C-118	"C" Starch Dryer	17.83	21.47	3.64	4.46	5.37	0.91	**	**	**
Argo 2-027G	Gluten Flash Dryer									
	System Line No.1	----	6.67	6.67	---	9.70	9.70	--	**	**
	Line No.2	----	6.67	6.67	---	9.70	9.70	--	**	**
Argo 2-059	Molten Sulfur System*	----	1.75	1.75	---	----	----	--		
	Total		59.86	22.13		30.59	21.15			

* Construction Permit 94030113

** See Table 1H

TABLE 1H
Netting by Phases

		SO ₂ Emissions (Tons/Year)			
				Netting	
		<u>Increases</u>	<u>Decreases</u>	<u>Phase</u>	<u>Overall</u>
Phase I		86.75	269.24	- 182.49	- 182.49
Phase II		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Project Total	86.75	269.24	- 182.49	- 182.49

		PM Emissions (Tons/Year)			
				Netting	
		<u>Increases</u>	<u>Decreases</u>	<u>Phase</u>	<u>Overall</u>
Phase I		38.90	54.50	- 15.59	- 15.59
Phase II		<u>0</u>	<u>3.86</u>	<u>- 3.86</u>	<u>- 19.45</u>
	Project Total	38.90	58.36	- 19.45	- 19.45

		VOM Emissions (Tons/Year)			
				Netting	
		<u>Increases</u>	<u>Decreases</u>	<u>Phase</u>	<u>Overall</u>
Phase I		65.05	76.55	- 11.50	- 11.50
Phase II		<u>0</u>	<u>0</u>	<u>0</u>	<u>- 11.50</u>
	Project Total	65.05	76.55	- 11.50	- 11.50

10.2 Attachment 2 - Emission Limits Established in
Construction Permit 91070044

TABLE 2A

Emission Limits for Argo 2-041 Equipment

Equipment	Particulate Matter <u>(lbs/hr)</u>	Emission Rate <u>(tons/yr)</u>
Sugar Dryer B/Cyclone, Scrubber	1.92	8.40
Product Transport System/Cyclone, Filter	1.38	6.03
Argo 2-014 Bulk Loading Increase*	*	<u>1.65</u>
		16.08 Total

* Sugar Bulk Loading, Argo 2-014, Construction Permit 99050046

TABLE 2B

General Limits for Equipment established in the Construction Permit 91070044

<u>CP</u>		<u>Emission Source</u>	<u>Annual</u> <u>Hours</u>	<u>Particulate Matter</u> <u>Emissions</u>	
<u>Designation</u>				<u>(tons/yr)</u>	<u>(lbs/hr)</u>
Argo	2-022	Sugar Dust System	8,550	10.46	2.45
Argo	2-024	Spent Flake Storage	8,550	8.60	2.02
Argo	2-025	Corn Cleanings Transfer System	8,550	1.56	0.37
Argo	2-026	Corn Cleanings to Storage System	8,550	13.92	3.26
Argo	2-028	Feed Transport System	8,550	17.93	4.19
Argo	2-032	Feed Dust System	8,550	<u>5.31</u>	1.24
			Total	57.8	

TABLE 2C

Contemporaneous Reductions in Emissions Accompanying Phase II

<u>Permit No.</u>	<u>Emission Source</u>	<u>Description of Reduction*</u>	
		<u>Amount (Ton/Yr)</u>	<u>Type</u>
72110146	Feed Dryer #4		Shut Down
		122.8	
72100145	Feed Dryer #5		Shut Down
72110144	Feed Dryer #6	261.5	Shut Down
72110091	Feed Dryer #7		Shut Down
72110110	Fiber Feed Colling	33.1	Shut Down
72110104	Pellet Mill Coolers	<u>76.5</u>	Shut Down
	Subtotal	493.9	
72100495	Feed Transport #1		Shut Down
72100508	Corn Germ Flake Bin		Shut Down
72110107	Dust Pick-up Silos & Conveyor		Shut Down
72110138	Gluten Dust Pick-up		Shut Down
81040039	Germ Drying		Shut Down
72100769	Corn Cleaning Bin		Shut Down
81040036	#2 Gluten Dryer		Shut Down
81040038	#3 Gluten Dryer		Shut Down
72100505	Germ Flake Loading		Shut Down
81040028	Dust Elevators & Conveyors		Shut Down
81040029	Pellet Dust Collection		Shut Down
81040030	Fiber Feed Transport #2		Shut Down
72110117	Rotocel Germ Flake		Shut Down
72100504	Corn Germ Flake Bin		Shut Down
81040034	Germ Flake Transport II		Shut Down
72110115	Dust Pick-up Flake Conveyor		Shut Down
72111577	Dust Pick-up Bldg. #17		Shut Down
72100501	Gluten Transport		Shut Down
72100493	Corn Gluten Feed Reprocess		Shut Down
81040033	Steam Tube Feed Dryer		Shut Down
76120033	"A" Fiber Pre-Dryer		Shut Down
	Subtotal	<u>11.0</u>	
	Total	504.9	

* The effective date for these reductions is April 29, 1988, the date of issuance of Construction Permit 86060049.

TABLE 2D
Miscellaneous Emission Limits

CP Designation	Emission Source	Monthly Hours	Annual Hours	Particulate Matter Emissions	
				(lbs/hr)	(tons/yr)
Argo 2-002	2001 Sugar Transport System 1	744	8,736	0.45	1.95
Argo 2-003	2001 Bulk Sugar Transport System 2	744	8,736	0.45	1.95
Argo 2-004	2001 Sugar Transport System 3	744	8,736	0.45	1.95
Argo 2-005	2001 Sugar Transport from A/B Dryer Mode 1: When Part of Exhaust Air Goes to Argo 2-045 FGD	744	8,550	0.789	3.37
Argo 2-005	2001 Sugar Transport from A/B Dryer Mode 2: All Exhaust Air Goes to Atmosphere	744	8,550	1.334	5.7
Argo 2-006	D Dryer 2001 Sugar Transport	744	8,550	1.334	5.7
Argo 2-007	E Dryer 2001 Sugar Transport	744	8,550	1.334	5.7
Argo 2-008	C Dryer 2031 Sugar Transport	744	8,550	0.51	2.16
Argo 2-009	2401 Sugar Transport System Filter	744	8,550	0.163	0.7
Argo 2-010	2034 Sugar Transport Filter	744	8,550	0.231	0.99
Argo 2-011	2031 & 2034 Sugar Transport Filter	744	8,550	***	***
Argo 2-011	Royal T Bulk Bin (48G283)	744	8,550	***	***
	*** Total for Argo 2-011			0.264	1.13
Argo 2-012	#1 Melt Tank & Bag Dump Scrubber	744	8,736	0.133	0.58
Argo 2-013	#2 Melt Tank & Bag Dump Scrubber	744	8,736	0.133	0.58
Argo 2-014	Bulk Loading System	744	8,736	0.4	1.65
Argo 2-015	House Dry Sugar Prod System Scrubber	744	8,760	0.42	1.83
Argo 2-016	Sugar Bagging Machines Scrubber	744	8,736	0.26	1.12
Argo 2-017	Soda Ash Unloading Filter	744	8,550	0.14	0.59
Argo 2-018	Corn Truck Unloading Filter	744	8,760	3.174	13.9
Argo 2-019	Corn Silos Handling Filter	744	8,736	0.771	3.37
Argo 2-020	East Filter Aid System (HYD) (41A07)	744	8,550	0.104	0.44
Argo 2-021	West Filter Aid System (C S) (49A08)	744	8,550	0.104	0.44
Argo 2-045	Fine Grade Dextrose Channel (Receives Air from Argo 2-005 Mode 1)	744	8,550	0.545	2.33
Argo 2-067	Dextrose Pack Bin (48G330)	744	8,760	0.274	1.2
Argo 2-067	Dex Product Collector - (2nd Unidex)	744	8,760	0.05	0.22
Argo 2-067	Fluid Bed Dryer (34D10 - 2nd Unidex)	744	8,760	2.4	10.5
Argo 2-067	Prod Receiver (34A31 - 2nd Unidex)	744	8,760	0.274	1.2
Argo 2-070	VFG Bulk Silo and Transport Systems	744	8,550	0.05	0.22
Argo 2-071	Four Conditioning Silos & Transport Systems	744	8,760	0.776	3.4
A-46-071	Anhydrous Cerelose Dryer & Cooler	744	8,550	0.55	2.36
A-10-065	Bleaching Clay System Filter (Silo)	744	4,920	0.24	0.59
A-60-140	BF Starch Transport Filter (#4)	744	6,320	0.137	0.433
A-60-140	BF Starch Processing Filter (#1)	744	6,320	1.234	3.9
A-60-140	BF West Silo Starch Proc. Filter (#2)	744	3,065	0.189	0.289
A-60-140	BF East Silo Starch Proc. Filter (#3)	744	3,065	0.189	0.289
A-10-066/147	Dicalite System Silo Filter	744	1,200	0.13	0.08
A-10-066/147	Dicalite System Receiver Filter	744	1,500	0.08	0.06

10.3 Attachment 3: Allowable Emissions of Particulate Matter

10.3.1 Process Emission Units for Which Construction or Modification Commenced Prior to April 14, 1972

- a. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced prior to April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 [35 IAC 212.322(a)].
- b. The emissions of particulate matter into the atmosphere in any one hour period from the affected unit shall not exceed the allowable emission rates specified in the following equation:

$$E = C + A(P)^B$$

Where:

P = Process weight rate;
 E = Allowable emission rate; and,

- i. For process weight rates up to 27.2 Mg/hr (30 T/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.985	4.10
B	0.67	0.67
C	0	0

- ii. For process weight rates in excess of 27.2 Mg/hr (30 T/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	25.21	55.0
B	0.11	0.11
C	- 18.4	- 40.0

- c. Limits for Process Emission Units for which Construction or Modification Commenced Prior to April 14, 1972 [35 IAC 212.322(c)]:

<u>Metric</u>		<u>English</u>	
P	E	P	E
Mg/hr	kg/hr	T/hr	lb/hr
0.05	0.27	0.05	0.55
0.1	0.42	0.10	0.87
0.2	0.68	0.20	1.40
0.3	0.89	0.30	1.83
0.4	1.07	0.40	2.22
0.5	1.25	0.50	2.58
0.7	1.56	0.75	3.38
0.9	1.85	1.00	4.10
1.8	2.9	2.00	6.52
2.7	3.9	3.00	8.56
3.6	4.7	4.00	10.40
4.5	5.4	5.00	12.00
9.0	8.7	10.00	19.20
13.0	11.1	15.00	25.20
18.0	13.8	20.00	30.50
23.0	16.2	25.00	35.40
27.2	18.5	30.00	40.00
32.0	18.8	35.00	41.30
36.0	19.3	40.00	42.50
41.0	19.8	45.00	43.60
45.0	20.2	50.00	44.60
90.0	23.2	100.00	51.20
140.0	25.3	150.00	55.40
180.0	26.5	200.00	58.60
230.0	27.7	250.00	61.00
270.0	28.5	300.00	63.10
320.0	29.4	350.00	64.90
360.0	30.0	400.00	66.20
400.0	30.6	450.00	67.70
454.0	31.3	500.00	69.00

10.3.2 Process Emission Units for Which Construction or Modification Commenced On or After April 14, 1972

- a. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321(a)].
- b. The emissions of particulate matter into the atmosphere in any one hour period from the affected coating lines shall not exceed the allowable emission rates specified in the following equation:

$$E = A(P)^B$$

Where:

P = Process weight rate;

E = Allowable emission rate; and,

i. For process weight rates of 408 Mg/hr (450 T/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

ii. For process weight rates in excess of 408 Mg/hr (450 T/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

d. Limits for Process Emission Units for which Construction or Modification Commenced On or After April 14, 1972 [35 IAC 212.321(c)]:

<u>Metric</u>		<u>English</u>	
P	E	P	E
<u>Mg/hr</u>	<u>kg/hr</u>	<u>T/hr</u>	<u>lb/hr</u>
0.05	0.25	0.05	0.55
0.1	0.29	0.10	0.77
0.2	0.42	0.2	1.10
0.3	0.64	0.30	1.35
0.4	0.74	0.40	1.58
0.5	0.84	0.50	1.75
0.7	1.00	0.75	2.40
0.9	1.15	1.00	2.60
1.8	1.66	2.00	3.70
2.7	2.1	3.00	4.60
3.6	2.4	4.00	5.35
4.5	2.7	5.00	6.00
9.0	3.9	10.00	8.70
13.0	4.8	15.00	10.80
18.0	5.7	20.00	12.50
23.0	6.5	25.00	14.00
27.0	7.1	30.00	15.60
32.0	7.7	35.00	17.00
36.0	8.2	40.00	18.20

41.0	8.8	45.00	19.20
45.0	9.3	50.00	20.50
90.0	13.4	100.00	29.50
140.0	17.0	150.00	37.00
180.0	19.4	200.00	43.00
230.0	22.0	250.00	48.50
270.0	24.0	300.00	53.00
320.0	26.0	350.00	58.00
360.0	28.0	400.00	62.00
408.0	30.1	450.00	66.00
454.0	30.4	500.00	67.00

10.4 Attachment 4 Example Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

AB:jar