

PART 70 OPERATING PERMIT
INDIANA DEPARTMENT OF ENVIRONMENTAL
MANAGEMENT
OFFICE OF AIR QUALITY

and

HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

CARGILL, INC.
1100 INDIANAPOLIS BOULEVARD
HAMMOND, INDIANA 46320

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. 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. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

Operation Permit No.: T089-7994-00203	
Issued by: _____ Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: <u>June 28, 2004</u>
Issued by: _____ Ronald L. Novak, Director Hammond Department of Environmental Management	Expiration Date: <u>June 28, 2009</u>

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and the Hammond Department of Environmental Management (HDEM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates Wet Corn Milling Facility.

Responsible Official:	Plant Manager
Source Address:	1100 Indianapolis Boulevard Hammond, Indiana 46320
Mailing Address:	1100 Indianapolis Boulevard Hammond, Indiana 46320-1094
General Source Phone Number:	(219) 659-2000
SIC Code:	2046 – Wet Corn Milling
County Location:	Lake
Source Location Status:	Nonattainment for ozone under the 8-hour standard Nonattainment for ozone under the 1-hour standard Nonattainment for SO ₂ , Attainment for PM ₁₀ , NO _x , CO, and Lead
Source Status:	Part 70 Permit Program Major Source, under PSD or Emission Offset Rules; and Nonattainment NSR Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

I. Biogas Flare

Biogas Flare (Unit ID 800-05-E), installed July 1995. Biogas is generated in the wastewater treatment plant by anaerobic reaction. The biogas flare converts the hydrogen sulfide (H₂S) in the biogas to sulfur dioxide (SO₂). It is used when the biogas stream is not being diverted to a plant process burner for energy recovery, which is the normal scenario. The biogas flare exhausts to stack ID S800-05-E.

II. Beta Cyclodextrin (BCD) Area and Hydroxypropyl Cyclodextrin (HPCD) Process

The BCD process uses a VOC catalyst and includes the following process units.

- (a) BCD Reaction and Separation (Unit ID 127-03-B), installed May 1993. VOC emissions from two (2) BCD reactors, a product stripper, and a by-product stripper are controlled by primary condensers a, b, and c that vent to and exhaust from the secondary and final polishing condenser 127-03-B(d).

- (b) BCD Dryer (Unit ID 127-01-B), installed December 1988. BCD crystals are passed through a rotary tray dryer. BCD loadout is controlled by a bag filter dust collector. This unit exhausts to stack ID S127-01-B.
- (c) BCD Mill Feed Hopper (Unit ID 127-25-B), installed May 1993. Particulate emissions are controlled by dust collector (CE127-25-B) that exhausts to stack S127-25-B.
- (d) No. 1 and No. 2 BCD Storage Hoppers (Unit ID 127-23-B and 127-24-B), installed in May 1993. BCD is pneumatically conveyed to these hoppers equipped with bag filter dust collectors that exhaust to stacks S127-23-B and S127-24-B.
- (e) No. 1 and No. 2 Vacuum Cleaner Systems (Unit ID 127-21-B and 127-22-B), installed in May 1993. These systems are for building dust. Particulate emissions are controlled by dust collectors that exhaust to stacks S127-21-B and S127-22-B.

Hydroxypropyl Cyclodextrin (HPCD) is made using the above beta-cyclodextrin (BCD), this process includes the following unit:

- (f) One (1) 5000 gallon Hydroxypropyl Cyclodextrin (HPCD) Reactor (Unit ID 127-27-B), installed in 1998. A 500 SCFM Catalytic/Thermal Oxidizer is used to oxidize 98% of the VOC emissions.

III. Grind and Feedhouse Area

- (a) Gluten Dryer System (Unit ID 121-01-G), installed March 1995. Gluten meal is fed to a natural and bio gas-fired ring dryer. Particulate emissions are controlled by wet scrubber (CE121-01-G) that exhausts to stack S121-01-G.
- (b) First Stage Germ Dryer Receiver (Unit ID 21A-01-G), installed May 1978. Corn germ is pneumatically transferred to a germ dryer. Particulate emissions are controlled by a cyclone (CE21A-01-G) that exhausts to stack S21A-01-G.
- (c) First Stage Germ Dryer (Unit ID 21A-02-G), installed May 1978. Corn germ is fed to this dryer heated with steam from plant boilers. Particulate emissions are controlled by a cyclone and wet roto-clone in series (CE21A-02-G) that exhaust to stack S21A-02-G.
- (d) Second Stage Germ Dryer Receiver (Unit ID 51A-01-G), installed May 1978. Corn germ from the first stage dryer is pneumatically conveyed to the second stage dryer. Particulate emissions are controlled by a cyclone (CE51A-01-G) that exhausts to stack S51A-01-G.
- (e) Second Stage Germ Dryer (Unit ID 51A-02-G), installed October 1995. Corn germ is fed to this dryer heated by steam from plant boilers. Particulate emissions are controlled by a cyclone and wet scrubber in series (CE51A-02-G) that exhausts to stack S51A-02-G.
- (f) Fiber Drying Equipment (Unit ID 89-01-G), installed October 1995. Wet fiber is fed to this natural and bio gas-fired dryer. Particulate matter is controlled by a scrubber (CE89-01-G) that exhausts to stack S89-01-G.
- (g) Rotary Feed Dryer (Unit ID 89-03-G), installed October 1995. Wet feed is fed to this natural and bio gas-fired dryer. Particulate emissions are controlled by four (4) recirculating cyclones. VOC emissions are controlled by thermal oxidizer (CE89-03-TO) that normally exhausts to the Fiber Dryer Furnace but can exhaust to its own stack S89-03-G.

- (h) Corn Screenings to Grind 1 Feed Transfer (Unit ID 89-05-G), installed July 2000. Particulate emissions are controlled by a dust collector (CE89-05-G) that exhausts to stack S89-05-G.
- (i) Waxy Feed Drum Dryer (Unit ID 124-01-G), installed March 1980. Waxy corn fiber is fed to a rotary drum dryer. Particulate emissions are controlled by a wet scrubber (CE124-01-G) that exhausts to stack S124-01-G.
- (j) Germ Storage Silo (Unit ID 121-14-G), installed May 1996. Corn germ is pneumatically conveyed to this storage silo. Particulate emissions are controlled by a dust collector (CE121-14-G) that exhausts to stack S121-14-G.
- (k) Germ Dryer/Cooler (Unit ID 124A-01-G), installed November 1994. Corn germ is fed to this natural and bio gas-fired germ dryer and cooler. Particulate emissions are controlled by four (4) cyclones (CE124A-01-G) that exhaust to stack S124A-01-G.
- (l) Waxy Feed Mill Equipment (Unit ID 124-22-G), installed July 1976. Waxy corn fiber is milled and fed to a hopper equipped with a Flex-Kleen Bag Filter Collector (CE124-22-G). This system exhausts to stack S124-22-G.
- (m) Corn Screenings to Grind 2 Feed Transfer (Unit ID 124-23-G), installed July 2000. Particulate emissions are controlled by a dust collector (CE124-23-G) that exhausts to stack S124-23-G.
- (n) Loose Feed Bin (Unit ID 201-05-G), installed October 2000. Particulate emissions are controlled by a bin vent (CE201-05-G) that exhausts to stack S201-05-G.
- (o) Hammermill #1 (Unit ID 201-01-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE201-01-G) that exhausts to stack S201-01-G.
- (p) Hammermill #2 (Unit ID 201-02-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE201-02-G) that exhausts to stack S201-02-G.
- (q) Pellet Cooler #1 (Unit ID 201-03-G), installed October 2000. Particulate emissions are controlled by a cyclone (CE201-03-G) that exhausts to stack S201-03-G.
- (r) Pellet Cooler #2 (Unit ID 201-04-G), installed October 2000. Particulate emissions are controlled by a cyclone (CE201-04-G) that exhausts to stack S201-04-G.
- (s) Central Vacuum Pelletizing (Unit ID 201-06-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE201-06-G) that exhausts to stack S201-06-G.
- (t) Central Vacuum Loadout (Unit ID 200-07-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-07-G) that exhausts to stack S200-07-G.
- (u) Pellet Silo #1 (Unit ID 200-01-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-01-G) that exhausts to stack S200-01-G.
- (v) Pellet Silo #2 (Unit ID 200-02-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-02-G) that exhausts to stack S200-02-G.
- (w) Loose Feed Silo (Unit ID 200-06-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-06-G) that exhausts to stack S200-06-G.

- (x) Gluten Silo (Unit ID 200-04-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-04-G) that exhausts to stack S200-04-G.
- (y) Germ Silo (Unit ID 200-03-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-03-G) that exhausts to stack S200-03-G.
- (z) Bulk Loadout (Unit ID 200-05-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-05-G) that exhausts to stack S200-05-G.
- (aa) Corn Dump Pit (Unit ID 140-05-G), installed December 1995. Particulate emissions are controlled by filter baghouse (CE140-05-G) that exhausts to stack S140-05-G.
- (bb) Corn Elevator Conveying (Unit ID 140-07-G), installed December 1995. Material is transferred from corn belt 1 to corn belt 2. Particulate emissions are controlled by a filter baghouse (CE140-07-G) that exhausts to stack S140-07-G.
- (cc) Corn Receiving and Storage, installed December 1995. This system includes six Storage Bins, each with its own bin vent for control of particulate emissions:
 - a) Bin #1: Unit ID 140-01-G
 - b) Bin #2: Unit ID 140-02-G
 - c) Bin #3: Unit ID 140-03-G
 - d) Bin #4: Unit ID 140-04-G
 - e) Bin #5: Unit ID 33-01-G
 - f) Bin #6: Unit ID 33-02-G
- (dd) Gravity Take-up Conveyor (Corn Scale System) (Unit ID 140-06-G), installed December 1995. Corn is transferred from corn belt 2 to corn belt 3. Particulate emissions are controlled by baghouse (CE140-06-G) that exhausts to stack S140-06-G.
- (ee) Corn Cleaner (Unit ID 33-03-G), installed December 1995. Corn passes through mechanical cleaners. Particular emissions are controlled by a filter baghouse (CE33-03-G) that exhausts to stack S33-03-G.
- (ff) Corn Screenings System (Unit ID 30-16-G), installed July 1976. This system includes a dirt storage silo equipped with bag filter collector (CE30-16-G) that exhausts to stack S30-16-G.

IV. Utility Area

The Utility area includes six (6) boilers used to supply steam for plant processes. A small rental, natural gas fired boiler is used when all boilers are down for maintenance.

- (a) Boiler No. 1 (Unit ID 10-01-U), Combustion Engineering Model VP10R, installed in 1960, with a maximum rate of 96 MMBtu/hr heat input and natural gas-fired only. This unit exhausts through stack S10-01-U.
- (b) Boiler No. 2 (Unit ID 10-02-U), Erie City Model 19M, installed in 1966, with a maximum rate of 160 MMBtu/hr heat input and natural gas-fired only. This unit exhausts through stack S10-02-U.
- (c) Boiler No. 6 (Unit ID 10-03-U), Combustion Engineering Model VU-50, installed in 1956, with a maximum rate of 200 MMBtu/hr heat input and natural gas-fired with a fuel oil #6 secondary capability. This unit exhausts through stack S10-03-U.

- (d) Boiler No. 7 (Unit ID 10-04-U), Combustion Engineering Model VU, installed in 1944, with a maximum rate of 120 MMBtu/hr heat input and natural gas-fired with a fuel oil #6 secondary capability. This unit also exhausts through stack S10-03-U.
- (e) Boiler No. 8 (Unit ID 10-05-U), Combustion Engineering Model VU, installed in 1937, with a maximum rate of 120 MMBtu/hr heat input and natural gas-fired with a fuel oil #6 secondary capability. This unit exhausts through stack S10-05-U.
- (f) Boiler No. 10 (Unit ID 10-06-U), Combustion Engineering Model VU, installed in 1937, with a maximum rate of 120 MMBtu/hr heat input and natural gas-fired with a fuel oil #6 secondary capability. This unit also exhausts through stack S10-05-U.

V. Refinery Area

- (a) Corn Syrup Solids Manufacturing System #2 (Unit ID 18-03-R), installed July 1992. Corn syrup solids are fed through a cooling tunnel, milled, screened, and dropped to a receiver for packing. Particulate emissions are controlled by a jet pulse dust collector (CE18-03-R) that exhausts to stack S18-03-R.
- (b) Corn Syrup Spray Dryer #4 (Unit ID 100-03-R), installed April 1992. Corn syrup is fed to a dryer. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet scrubber (CE100-03-R) that exhausts to stack S100-03-R.
- (c) Corn Syrup Spray Dryer/Cooler System #3 (Unit ID 100-01-R), installed July 1987. Corn syrup is fed to a dryer. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet venturi scrubber (CE100-01-R) that exhausts through stack S100-01-R.
- (d) Activated Carbon Regeneration Furnace #2 (Unit ID 104-01-R), installed July 1995. Spent carbon is regenerated in this natural gas-fired furnace. Emissions are controlled by a venturi scrubber and an impingement furnace scrubber (CE104-01-R) that exhaust through stack S104-01-R.
- (e) Soda Ash Tank (Unit ID 104-02-R), installed July 1995. Particulate emissions from loading this tank are controlled by a venturi scrubber (CE104-02-R) that exhausts to stack S104-02-R.
- (f) Filter Aid Hopper (Unit ID 104-03-R), installed July 1995. This hopper is equipped with a jet pulse baghouse (CE104-03-R) that exhausts to stack S104-03-R.
- (g) Sodium Bisulfite Bag Dump (Unit ID 104-05-R), installed July 1995. This unit is controlled by a jet pulse baghouse (CE104-05-R) that exhausts to stack S104-05-R.
- (h) Diatomaceous Earth Unloading (Unit ID 104-08-R), installed November 1998. Diatomaceous earth (filter aid) is unloaded from railcar to Silo. Particulate emissions are controlled by a Bin Vent Filter (DC2312) that exhausts to stack S104-08-R.
- (i) Citric Acid Dump Station (Unit ID 104-09-R), installed November 1998. Citric Acid is added during the production of corn syrup. Particulate emissions are controlled by a built-in dust collector (CE104-09-R) that exhausts to stack S104-09-R.

VI. Starch Production Area

- (a) Batch Scale Hopper #1 (Unit ID 34-01-S), installed January 1991. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-01-S) that exhausts to stack S34-01-S.
- (b) Dextrin Starch Reactor #1 (Unit ID 34-02-S), installed January 1991. Dried corn starch is fed to a reactor heated by steam from the plant boilers. Particulate emissions are controlled by a bag filter dust collector (CE34-02-S) that exhausts to stack S34-02-S.
- (c) Dextrin Starch Cooler #1 (Unit ID 34-03-S), installed January 1991. Roasted corn starch is fed to a cooler and transferred to a hopper for storage. Particulate emissions are controlled by a bag filter dust collector (CE34-03-S) that exhausts to stack S34-03-S.
- (d) Surge Hopper #1 (Unit ID 34-05-S), installed January 1991. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-05-S) that exhausts to stack S34-05-S.
- (e) Dextrin Feed Hoppers #1 and #2 (System #1) (Unit IDs 34-06-S and 34-07-S), installed April 1993. Starch is gravity conveyed to these hoppers. Particulate emissions are controlled by bag filter dust collectors (CE34-06-S and CE34-07-S) that exhaust to stacks S34-06-S and S34-07-S.
- (f) Batch Scale Hopper #2 (Unit ID 34B-13-S), installed October 1993. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34B-13-S) that exhausts to stack S34B-13-S.
- (g) Dextrin Starch Reactor #2 (Unit ID 34B-04-S), installed October 1993. Dried corn starch is fed to a reactor heated by steam from the plant boilers. Particulate emissions are controlled by a bag filter dust collector (CE34B-04-S) that exhausts to stack S34B-04-S.
- (h) Dextrin Starch Cooler #2 (Unit ID 34B-01-S), installed October 1993. Roasted corn starch is fed to a cooler and transferred to a hopper for storage. Particulate emissions are controlled by dust collector (CE34B-01-S) that exhausts to stack S34B-01-S.
- (i) Surge Hopper #2 (Unit ID 34B-03-S), installed October 1993. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34B-03-S) that exhausts to stack S34B-03-S.
- (j) Dextrin Feed Hoppers #3 and #4 (System #2) (Unit IDs 34B-05-S and 34B-06-S), installed October 1993. Starch is gravity conveyed to these hoppers. Particulate emissions are controlled by bag filter dust collectors (CE34B-05-S and CE34B-06-S) that exhaust to stacks S34B-05-S and S34B-06-S.
- (k) Dextrin Bulk Loading Equipment (Unit ID 48-09-S), installed before 1977. Starch is pneumatically conveyed to this hopper. Particulate emissions are controlled by a bag filter dust collector (CE48-09-S) that exhausts to stack S48-09-S.
- (l) Starch Ring Dryer #2 (Unit ID 59-03-S), installed November 1993. Starch is fed to this natural gas-fired ring dryer. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE59-03-S) that exhausts to stack S59-03-S.

- (m) Starch Milling Systems #1 and #2 (Unit IDs 59-01-S and 59-02-S), installed July 1976. Dried corn starch is milled and transferred to storage. Particulate emissions are controlled by bag filter dust collectors (CE59-01-S and CE59-02-S) that exhaust to stacks S59-01-S and S59-02-S.
- (n) Starch Ring Dryer #3 (Unit ID 125-01-S), installed May 1980. Corn starch is fed to this natural gas-fired ring dryer. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE125-01-S) that exhausts to stack S125-01-S.
- (o) Special Starch Process with Starch Ring Dryer #4 (Unit ID 128-01-S), installed December 1993. Corn starch is fed to this natural gas-fired dryer. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by wet scrubber (CE128-01-S) that exhausts to stack S128-01-S.
- (p) Reactors #1 through #8 (Unit IDs 128-06-S through 128-13-S), installed November 1988 (1-4) and December 1991 (5-8). Corn starch and propylene oxide are reacted through Reactors 2, 3, 4, and 7 only. When propylene oxide is used in the starch reaction, VOC emissions are controlled by a thermal oxidizer that exhausts to stack S128-14-S.
- (q) Sodium Sulfate Storage Bin (Unit ID 128-25-S), installed October 2000. Particulate emissions are controlled by a bin vent dust collector (FA1900), that exhausts to stack S128-25-S.
- (r) Sodium Sulfate Weigh Bin (Unit ID 128-26-S), installed October 2000. Particulate emissions are controlled by a bin vent dust collector (FA1950), that exhausts to stack S128-26-S.
- (s) Cornstarch Storage Bins #20 through #36 (Unit IDs 120-01-S through 120-17-S), installed July 1990. Corn starch is pneumatically conveyed to these storage bins. Particulate emissions are controlled by bag filter dust collectors that exhaust to stacks S120-01-S through S120-17-S.
- (t) Waxy Cornstarch Bulk Storage Bins #95 through #98 (Unit IDs 126-01-S through 126-04-S), replaced in January 1996. Waxy cornstarch is conveyed to these bins. Particulate emissions are controlled by dust collectors (CE126-01-S through CE126-04-S) that exhaust to stacks S126-01-S through S126-04-S.
- (u) Cornstarch Blending Systems #1 through #4 (Unit IDs 130-01-S through 130-04-S), installed April 1988. Cornstarch is blended and moved to the warehouse for packing. Particulate emissions are controlled by bag filter dust collectors (CE130-01-S through 130-04-S) that exhaust to stacks S130-01-S through S130-04-S.
- (v) Dextrin Blender (Unit ID 130-05-S), installed October 1993. Cornstarch is blended and moved to the warehouse for packing. Particulate emissions are controlled by a bag filter dust collector (CE130-05-S) that exhausts to stack S130-05-S.
- (w) One (1) 28,000 gallon horizontal propylene oxide tank (Unit ID 93-18-S), installed in 1988, with 95% efficient vapor recovery (liquid nitrogen condenser). This tank also provides propylene oxide to other starch processes.

VII. Starch Warehouse Area

- (a) Channel 2 Receiver (Unit ID 93-32-W), installed September 2000. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-32-W.

- (b) Channel 3 Receiver (Unit ID 93-33-W), installed September 2000. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-33-W.
- (c) Channel 4 Receiver (Unit ID 93-34-W), installed September 2000. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-34-W.
- (d) Channel 6 Receiver (Unit ID 93-35-W), installed September 2000. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-35-W.
- (e) Channel 4/6 Packing (Unit ID 93-37-W), installed September 2000. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-37-W.
- (f) Channel 2/3 Packing (Unit ID 93-36-W), installed September 2000. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-36-W.
- (g) Central Vacuum System (Unit ID 93-38-W), installed October 2000. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-38-W.
- (h) Dried Corn Syrup Conveying System (Unit ID 93-04-W), installed July 1976. Particulate emissions are controlled by a baghouse (CE93-04-W) that exhausts to stack S93-04-W.
- (i) Corn Syrup Solids Conveying System (Unit ID 93-05-W), installed July 1976. Particulate emissions are controlled by a baghouse (CE93-05-W) that exhausts to stack S93-05-W.
- (j) Frodex Semi-bulk Packing System (Unit ID 93-08-W), installed September 1989. Particulate emissions are controlled by a baghouse (CE93-08-W) that exhausts to stack S93-08-W.
- (k) Corn Starch Bag Dumping Stations #1 and #2 (Unit IDs 93-09-W and 93-10-W), installed April 1988. Particulate emissions are controlled by bag filter dust collectors (CE93-09-W and CE93-10-W) that exhaust to stacks S93-09-W and S93-10-W.
- (l) Starch Bulk Loading (Unit ID 93-14-W), installed April 1995. Particulate emissions are controlled by a baghouse (CE93-14-W) that exhausts to stack S93-14-W.
- (m) Starch Bulk Loading Vacuum Cleanup System (Unit ID 93-15-W), installed February 1994. Cleanup for cornstarch spills. Particulate emissions are controlled by bag filter dust collector (CE93-15-W) that exhausts to stack S93-15-W.
- (n) Starch Mixing and Bulk Bagging Systems #1 and #2 (Unit IDs 93-16-W and 93-17-W), installed August 1995. Particulate emissions are controlled by baghouses (CE93-16-W and CE93-17-W) that exhaust to stacks S93-16-W and S93-17-W.
- (o) P.G. Starch Receiver (Unit ID 93-18-W), installed September 1999. Starch is received from P.G. starch roll dryers for packaging. Particulate emissions are controlled by a dust collector (CE93-18-W) that exhausts to stack S93-18-W.
- (p) P.G. Starch Packing (Unit ID 93-39-W), installed January 2000. Particulate emissions are controlled by a dust collector (CE93-39-W) that exhausts to stack S93-39-W.

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

This source also consists of insignificant activities with potential uncontrolled emissions below the exemption levels specified in 326 IAC 2-1.1-3(d)(1), including these defined in 326 IAC 2-7-1(21).

1. Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour [326 IAC 6-1-2].
2. Fuel oil-fired combustion sources with heat input equal to or less than 2 million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight [326 IAC 6-1-2].
3. Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour.
4. Combustion source flame safety purging on startup.
5. A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
6. A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
7. VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
8. VOC and HAP vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
9. Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.
10. Machining where an aqueous cutting coolant continuously floods the machining interface.
11. Cleaners and solvents characterized as follows:
 - A) having a vapor pressure equal to or less than 2 kPa; 15mm Hg; or 0.3 psi measured at 38°C (100°F) or;
 - B) having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
12. The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-1-2]
13. Closed loop heating and cooling systems.
14. Structural steel and bridge fabricating activities using 80 tons or less of welding consumables.
15. Solvent recycling systems with batch capacity less than or equal to 100 gallons.

16. Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.
17. Operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.
18. Noncontact cooling tower systems with forced and induced draft cooling tower system not regulated under a NESHAP.
19. Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
20. Heat exchanger cleaning and repair.
21. Process vessel degassing and cleaning to prepare for internal repairs.
22. Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
23. Asbestos abatement projects regulated by 326 IAC 14-10.
24. Purging of gas lines and vessels that is regulated to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
25. Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
26. Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
27. On-site fire and emergency response training approved by the department.
28. Diesel emergency generators not exceeding 1600 horsepower.
29. Stationary fire pumps.
30. Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations [326 IAC 6-1-2]
31. Filter or coalescer media changeout.
32. A laboratory as defined in 326 IAC 2-7-1(21)(D).

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

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

SECTION B GENERAL CONDITIONS

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

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.9]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.3 Enforceability [326 IAC 2-7-7]

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

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

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

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

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

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

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

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, and HDEM within a reasonable time, any information that IDEM, OAQ, and HDEM may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, and HDEM copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

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

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

and

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and HDEM on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;

- (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
- (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, and HDEM may require to determine the compliance status of the source.

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

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]
[326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

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

- (b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, and HDEM upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ, and HDEM. IDEM, OAQ, and HDEM may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (d) To the extent the Permittee is required by 40 CFR 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and HDEM within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

(IDEM)

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone Number: 317-233-5674 (ask for Compliance Section)

Facsimile Number: 317-233-5967

(HDEM)

Telephone Number: 219-853-6306

Facsimile Number: 219-853-6343

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, and HDEM may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(9) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, and HDEM by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, or HDEM shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
 - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
 - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
 - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, or HDEM has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, or HDEM has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

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

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, Indiana 46320

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, or HDEM determines any of the following:
- (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ, or HDEM to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, or HDEM at least

thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, or HDEM may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-4]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and HDEM and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(40) and 326 IAC 2-7-1(21). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

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

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

- (b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]
- (1) A timely renewal application is one that is:
- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and HDEM on or before the date it is due.
- (2) If IDEM, OAQ, and HDEM, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.
- (c) Right to Operate After Application for Renewal [326 IAC 2-7-3]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, and HDEM take final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, and HDEM, any additional information identified as being needed to process the application.
- (d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]
If IDEM, OAQ, and HDEM fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]
- (d) No permit amendment or modification is required for the addition, operation, or removal of a nonroad engine, as defined in 40 CFR 89.2.

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)]
[326 IAC 2-7-12 (b)(2)]

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

B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana
(AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

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

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

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-17-3-2] [IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, HDEM, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

Indianapolis, Indiana 46206-6015

and

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, and HDEM within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, or HDEM the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section (BLT)), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314]

Notwithstanding the conditions of this permit that state specific methods that may be used to demonstrate compliance with, or a violation of, applicable requirements, any person (including the Permittee) may also use other credible evidence to demonstrate compliance with, or a violation of, any term or condition of this permit.

SECTION C SOURCE OPERATION CONDITIONS

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

C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3(a)(2)(A) and (B) are not federally enforceable.

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

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

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

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.5 Fugitive Dust Emissions [326 IAC 6-1-11.1]

Pursuant to 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements:

- (a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
- (b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (c) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
- (d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.

- (f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.
- (g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (h) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
- (i) The PM₁₀ emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (j) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- (k) Any facility or operation not specified in 326 IAC 6-1-11.1(d) shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan.

C.6 Lake County Particulate Matter Contingency Measures [326 IAC 6-1-11.2]

The Permittee shall comply with the applicable provisions of 326 IAC 6-1-11.2 (Lake County Particulate Matter Contingency Measures).

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

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.8 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 1-7-2, 1-7-3(c) and (d), 1-7-4, and 1-7-5 (a), (b), and (d) are not federally enforceable.

C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

- (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10- 3(3).

All required notifications shall be submitted to:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 60.145(a).
- (g) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos Inspector is not federally enforceable.

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

C.10 Performance Testing [326 IAC 3-6]

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

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

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ and HDEM not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, and HDEM, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.11 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

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

C.12 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality

100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, Indiana 46320

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.13 Continuous Compliance Plan [326 IAC 6-1-10.1(l)] [326 IAC 6-1-10.1(u)]

Pursuant to 326 IAC 6-1-10.1(l) (Lake County PM10 Emission Requirements), the Permittee shall submit to IDEM and HDEM, and maintain at the source a copy of the Continuous Compliance Plan. The Permittee shall perform the inspections, monitoring, and record keeping requirements as specified in 326 IAC 6-1-10.1 (p) through (r). The Permittee shall update the CCP, as needed, retain a copy on site, and make the updated CCP available for inspection as specified in 326 IAC 6-1-10.1(u).

C.14 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment.
- (b) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.
- (c) Whenever a continuous emission monitor other than an opacity monitor is malfunctioning or will be down for calibration, maintenance, or repairs for a period of four (4) hours or more, a calibrated backup CEMS shall be brought online within four (4) hours of the shutdown of the primary CEMS, and shall be operated until such time as the primary CEMS is back in operation.
- (d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to the rule or permit condition that requires the monitoring equipment to be installed and operated.

C.15 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.16 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a temperature, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

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

C.17 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on February 26, 1991.
- (b) Upon direct notification by IDEM, OAQ, or HDEM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.18 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the source must comply with the applicable requirements of 40 CFR 68.

C.19 Compliance Response Plan – Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. If a Permittee is required to have an Operation, Maintenance, and Monitoring (OMM) Plan (or Parametric Monitoring Plan and Start-up, Shut-down, and Malfunction (SSM) Plan) under 40 CFR 60/63, such plan shall be deemed to satisfy the requirements for a CRP for those compliance monitoring conditions. A CRP shall be submitted to IDEM, OAQ and HDEM upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
 - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
 - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan or Operation, Maintenance, and Monitoring (OMM) Plan (or Parametric Monitoring Plan and

Start-up, Shut-down, and Malfunction (SSM) Plan) and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan or Operation, Maintenance, and Monitoring (OMM) Plan (or Parametric Monitoring Plan and Start-up, Shut-down, and Malfunction (SSM) Plan) to include such response steps taken.

The OMM Plan (or Parametric Monitoring and SMM Plan) shall be submitted within the time frames specified by the applicable 40 CFR 60/63 requirement.

- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan or Operation, Maintenance, and Monitoring (OMM) Plan (or Parametric Monitoring Plan and Start-up, Shut-down, and Malfunction (SSM) Plan); or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan or Operation, Maintenance, and Monitoring (OMM) Plan (or Parametric Monitoring Plan and Start-up, Shut-down, and Malfunction (SSM) Plan) is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
 - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the permittee shall promptly notify the IDEM-OAQ of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred,

the Permittee shall report such deviations pursuant to Section B - Deviations from Permit Requirements and Conditions.

- (e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.20 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

C.21 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

- (a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:
 - (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
 - (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purposes of Part 70 fee assessment.

This statement must be submitted to:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

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

- (b) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and HDEM on or before the date it is due.

C.22 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (a) Records of all required monitoring data, reports and support information required by this Permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or HDEM makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or HDEM within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.23 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and HDEM on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.24 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

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

Part 2 MACT Application Submittal Requirement

C.25 Application Requirements for Section 112(j) of the Clean Air Act [40 CFR 63.52(e)] [40 CFR 63.56(a)] [40 CFR 63.9(b)] [326 IAC 2-7-12]

- (a) The Permittee shall submit a Part 2 MACT Application in accordance with 40 CFR 63.52(e)(1). The Part 2 MACT Application shall meet the requirements of 40 CFR 63.53(b).
- (b) Notwithstanding paragraph (a), the Permittee is not required to submit a Part 2 MACT Application if the Permittee no longer meets the applicability criteria of 40 CFR 63.50 by the application deadline in 40 CFR 63.52(e)(1). For example, the Permittee would not have to submit a Part 2 MACT Application if, by the application deadline:
 - (1) The source is no longer a major source of hazardous air pollutants, as defined in 40 CFR 63.2;
 - (2) The source no longer includes one or more units in an affected source category for which the U.S. EPA failed to promulgate an emission standard by May 15, 2002; or

- (3) The MACT standard or standards for the affected source categories included at the source are promulgated.
- (c) Notwithstanding paragraph (a), pursuant to 40 CFR 63.56(a), the Permittee shall comply with an applicable promulgated MACT standard in accordance with the schedule provided in the MACT standard if the MACT standard is promulgated prior to the Part 2 MACT Application deadline or prior to the issuance of a permit with a case-by-case Section 112(j) MACT determination. The MACT requirements include the applicable General Provisions requirements of 40 CFR 63, Subpart A. Pursuant to 40 CFR 63.9(b), the Permittee shall submit an initial notification not later than 120 days after the effective date of the MACT, unless the MACT specifies otherwise. The initial notification shall be submitted to:

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

and

United States Environmental Protection Agency, Region V
Director, Air and Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

and

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

SECTION D.1 FACILITY OPERATION CONDITIONS

<p>Facility Description [326 IAC 2-7-5(15)]: <u>I. Biogas Flare</u></p> <p>Biogas Flare (Unit ID 800-05-E), installed July 1995. Biogas is generated in the wastewater treatment plant by anaerobic reaction. The biogas flare converts the hydrogen sulfide (H₂S) in the biogas to sulfur dioxide (SO₂). It is used when the biogas stream is not being diverted to a plant process burner for energy recovery, which is the normal scenario. The biogas flare exhausts to stack ID S800-05-E.</p> <p>(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)</p>
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Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Emission Limitations and Standards [326 IAC 2-2]

Any change or modification to the Biogas Flare which increases the potential to emit (PTE) of Hydrogen Sulfide (H₂S) to above ten (10) tons per year, shall require prior approval of the IDEM-OAQ and HDEM. Compliance with this limitation renders 326 IAC 2-2 not applicable.

Compliance Determination Requirements

D.1.2 Compliance Determination Requirements

To determine compliance with Condition D.1.1, the biogas stream from anaerobic reaction shall be diverted to an active plant process burner or to the biogas flare at all times that a biogas stream is being generated.

Compliance Monitoring Requirements

D.1.3 Flame Presence

The Permittee shall monitor and record once per shift the flame presence for the Biogas Flare during each shift of operation that the biogas stream is venting to the flare. The flame presence shall be determined using either a thermal sensor or flame detector at the point of the flame.

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

D.1.4 Record Keeping Requirements

- (a) To document compliance with Condition D.1.3, the Permittee shall maintain records of the flame presence.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: II. Beta Cyclodextrin (BCD) Area and Hydroxypropyl Cyclodextrin (HPCD)

The BCD process uses a VOC catalyst and includes the following process units.

- (a) BCD Reaction and Separation (Unit ID 127-03-B), installed May 1993. VOC emissions from two (2) BCD reactors, a product stripper, and a by-product stripper are controlled by primary condensers a, b, and c that vent to and exhaust from the secondary and final polishing condenser 127-03-B(d).
- (b) BCD Dryer (Unit ID 127-01-B), installed December 1988. BCD crystals are passed through a rotary tray dryer. BCD loadout is controlled by a bag filter dust collector. This unit exhausts to stack ID S127-01-B.
- (c) BCD Mill Feed Hopper (Unit ID 127-25-B), installed May 1993. Particulate emissions are controlled by bag filter dust collector (CE127-25-B) that exhausts to stack S127-25-B.
- (d) No. 1 and No. 2 BCD Storage Hoppers (Unit IDs 127-23-B and 127-24-B), installed May 1993. BCD is pneumatically conveyed to these hoppers equipped with bag filter dust collectors that exhaust to stacks S127-23-B and S127-24-B.
- (e) No. 1 and No. 2 Vacuum Cleaner Systems (Unit IDs 127-21-B and 127-22-B), installed May 1993. The systems are used for building dust. Particulate emissions are controlled by bag filter dust collectors that exhaust to stacks S127-21-B and S127-22-B.

Hydroxypropyl Cyclodextrin (HPCD) is made using the above beta-cyclodextrin (BCD) and includes the following units:

- (f) One (1) 5,000 gallon Hydroxypropyl Cyclodextrin (HPCD) Reactor (Unit ID 127-27-B), installed 1998. A 500 SCFM Catalytic/Thermal Oxidizer is used to oxidize 98% of the VOC emissions.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

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

D.2.1 VOC Emissions [326 IAC 2-3] [326 IAC 8-1-6] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 2-3 (Emission Offset) and/or 326 IAC 8-1-6 (New facilities, general reduction requirements (BACT)). Therefore, the Permit Shield provided by Condition B.12 of this permit does not apply to those emission units with regards to 326 IAC 2-3 and 326 IAC 8-1-6. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-3 or 326 IAC 8-1-6 and a schedule for achieving compliance with such requirements.

D.2.2 VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties). Therefore, the Permit Shield provided by Condition B.12 of this permit does not apply to those emission units with regards to 326 IAC 8-7. On February 27, 1995, the source submitted to IDEM, OAQ a Reasonably Achievable Control Technology (RACT) plan pursuant to 326 IAC 8-7-2. A revised RACT plan was requested and submitted by the source on August 22, 2003. The IDEM, OAQ is currently reviewing the RACT plan submitted.

The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 8-7 and a schedule for achieving compliance with such requirements.

D.2.3 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6-1-10.1(d)]

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (d), emissions of particulate matter less than ten microns in diameter (PM10) shall be limited to the following.

Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
BCD Dryer (127-01-B)	0.01	0.57
BCD Mill Feed Hopper (127-25-B)	0.01	0.028
BCD Storage Hoppers #1 & #2 (127-23-B) & (127-24-B)	0.01 each	0.18 each
BCD Vacuum Cleaners #1 & #2 (127-21-B) & (127-22-B)	0.01 each	0.031 each

D.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to CP 089-01210-00203, issued July 1998, the VOC emissions from the HPCD Reactor shall be limited to 0.250 lbs/hr which is equivalent to 1.1 TPY as maintained by a thermal oxidizer with an overall capture and control efficiency of 98% in accordance with the best available control technology (BACT) requirement in 326 IAC 8-1-6 (New Facilities: General Reduction Requirements).

D.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.2.6 Testing Requirements [326 IAC 2-7-6(1) and (6)] [326 IAC 2-1.1-11]

BCD Dryer (PM10) [326 IAC 6-1-10.1(d)]

Within 36 months of the issuance of this permit, in order to demonstrate compliance with Condition D.2.3, the Permittee shall perform PM-10 testing on the BCD Dryer utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

D.2.7 Volatile Organic Compounds (VOC) [326 IAC 2-1.1-5] [326 IAC 8-7-9] [326 IAC 8-7-10]

The BCD reaction and separation condensers for VOC control shall be installed, calibrated, maintained, and operated, at a minimum, according to the manufacturer's specifications and recommendations.

D.2.8 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6-1-10.1(d)]

In order to comply with D.2.3, the bag filter dust collectors for PM10 control shall be in operation and control emissions from their associated facilities at all times that the facilities are in operation.

D.2.9 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

In order to comply with D.2.4, the thermal oxidizer for VOC control shall be in operation and control emissions from the HPCD reactor at all times that the facilities are in operation.

D.2.10 Parametric Monitoring (Thermal Oxidizer) [326 IAC 8-1-6]

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded as a 3-hour average. The Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature of 1300 °F.
- (b) In order to maintain a 98% destruction efficiency, 100% of the vapors from the HPCD Reactor shall vent directly to the Thermal Oxidizer.
- (c) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the reading is outside the above-mentioned range for any one reading. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

Compliance Monitoring Requirements

D.2.11 VOC Emissions (BCD) [326 IAC 2-1.1-5] [326 IAC 8-7-9] [326 IAC 8-7-10]

- (a) The Permittee shall inspect the BCD reactor seals once per year and replace the seals as needed according to the manufacturer's design specifications and recommendations.
- (b) The Permittee shall maintain and monitor the temperature of the water flow to condensers 127-03-B according to the manufacturer's design specifications and recommendations.

D.2.12 Parametric Monitoring (Dust Collectors)

The Permittee shall record the total static pressure drop across all baghouses or dust collectors used in conjunction with each BCD facility at least once per day when the associated facilities are in operation. When for any one reading, the pressure drop across the dust collector is outside the following ranges or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range ("H ₂ O)
BCD Dryer (127-01-B)	Dust Collector	0.1 - 6
BCD Mill Feed Hopper (127-25-B)	Dust Collector	0.1 - 6
BCD Storage Hoppers #1 & #2 (127-23-B) & (127-24-B)	Dust Collector	0.1 - 6 each
BCD Vacuum Cleaners #1 & #2 (127-21-B) & (127-22-B)	Dust Collector	0.1 - 6 each

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM-OAQ and HDEM and shall be calibrated at least once every six (6) months or in accordance with the manufacturer's specifications provided those specifications are available on site with the Preventive Maintenance Plan.

D.2.13 Baghouse (Dust Collector) Inspections

An inspection shall be performed each calendar quarter of all bags controlling these processes. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.2.14 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, or dust traces, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.2.15 Visible Emissions Notations

- (a) Visible emission notations of each BCD and HPCD particulate stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

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

D.2.16 Record Keeping Requirements

- (a) To document compliance with Condition D.2.4, the Permittee shall maintain records of the VOC use in the HPCD reactors (propylene oxide).
- (b) To document compliance with Condition D.2.11, the Permittee shall maintain records of the results of the inspections and records of the temperature of the water flow to the condensers.
- (c) To document compliance with Condition D.2.12, the Permittee shall maintain records of the total static pressure drops during normal operation.
- (d) To document compliance with Condition D.2.13, the Permittee shall maintain records of the results of the inspections.
- (e) To document compliance with Condition D.2.15, the Permittee shall maintain records of the visible emission notations of the BCD Area facility stack exhausts.
- (f) To document compliance with Condition D.2.10, the Permittee shall record the thermal oxidizer temperature as a 3-hour average.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.17 Reporting Requirements

The source submitted to IDEM, OAQ a Reasonably Achievable Control Technology (RACT) plan pursuant to 326 IAC 8-7-2 on February 27, 1995. A revised RACT plan was requested and submitted by the source on August 22, 2003. The IDEM, OAQ is currently reviewing the RACT plan submitted. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 8-7 and a schedule for achieving compliance with such requirements.

SECTION D.3 FACILITY OPERATION CONDITIONS

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

III. Grind and Feedhouse Area

- (a) Gluten Dryer System (Unit ID 121-01-G), installed March 1995. Gluten meal is fed to a natural and bio gas-fired ring dryer. Particulate emissions are controlled by wet scrubber (CE121-01-G) that exhausts to stack S121-01-G.
- (b) First Stage Germ Dryer Receiver (Unit ID 21A-01-G), installed May 1978. Corn germ is pneumatically transferred to a germ dryer. Particulate emissions are controlled by a cyclone (CE21A-01-G) that exhausts to stack S21A-01-G.
- (c) First Stage Germ Dryer (Unit ID 21A-02-G), installed May 1978. Corn germ is fed to this dryer heated with steam from plant boilers. Particulate emissions are controlled by a cyclone and wet roto-clone in series (CE21A-02-G) that exhausts to stack S21A-02-G.
- (d) Second Stage Germ Dryer Receiver (Unit ID 51A-01-G), installed May 1978. Corn germ from the first stage dryer is pneumatically conveyed to the second stage dryer. Particulate emissions are controlled by a cyclone (CE51A-01-G) that exhausts to stack S51A-01-G.
- (e) Second Stage Germ Dryer (Unit ID 51A-02-G), installed October 1995. Corn germ is fed to this dryer heated with steam from plant boilers. Particulate emissions are controlled by a cyclone and wet scrubber in series (CE51A-02-G) that exhausts to stack S51A-02-G.
- (f) Fiber Drying Equipment (Unit ID 89-01-G), installed October 1995. Wet fiber is fed to this natural and bio gas-fired dryer. Particulate matter is controlled by a scrubber (CE89-01-G) that exhausts to stack S89-01-G.
- (g) Rotary Feed Dryer (Unit ID 89-03-G), installed October 1995. Wet feed is fed to this natural and bio gas-fired dryer. Particulate emissions are controlled by four (4) recirculating cyclones. VOC emissions are controlled by a thermal oxidizer (CE89-03-TO) that normally exhausts to the Fiber Dryer Furnace but can exhaust to its own stack S89-03-G.
- (h) Corn Screenings to Grind 1 Feed Transfer (Unit ID 89-05-G), installed July 2000. Particulate emissions are controlled by a dust collector (CE89-05-G) that exhausts to stack S89-05-G.
- (i) Waxy Feed Drum Dryer (Unit ID 124-01-G), installed March 1980. Waxy corn fiber is fed to a rotary drum dryer. Particulate emissions are controlled by a wet scrubber (CE124-01-G) that exhausts to stack S124-01-G.
- (j) Germ Storage Silo (Unit ID 121-14-G), installed May 1996. Corn germ is pneumatically conveyed to this storage silo. Particulate emissions are controlled by a dust collector (CE121-14-G) that exhausts to stack S121-14-G.
- (k) Germ Dryer/Cooler (Unit ID 124A-01-G), installed November 1994. Corn germ is fed to this natural and bio gas-fired germ dryer and cooler. Particulate emissions are controlled by four (4) cyclones (CE124A-01-G) that exhaust to stack S124A-01-G.
- (l) Waxy Feed Mill Equipment (Unit ID 124-22-G), installed July 1976. Waxy corn fiber is milled and fed to a hopper equipped with a Flex-Kleen Bag Filter Collector (CE124-22-G) that exhausts to stack S124-22-G.
- (m) Corn Screenings to Grind 2 Feed Transfer (Unit ID 124-23-G), installed July 2000. Particulate emissions are controlled by a dust collector (CE124-23-G) that exhausts to stack S124-23-G.

- (n) Loose Feed Bin (Unit ID 201-05-G), installed October 2000. Particulate emissions are controlled by a bin vent (CE201-05-G) that exhausts to stack S201-05-G.
- (o) Hammermill #1 (Unit ID 201-01-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE201-01-G) that exhausts to stack S201-01-G.
- (p) Hammermill #2 (Unit ID 201-02-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE201-02-G) that exhausts to stack S201-02-G.
- (q) Pellet Cooler #1 (Unit ID 201-03-G), installed October 2000. Particulate emissions are controlled by a cyclone (CE201-03-G) that exhausts to stack S201-03-G.
- (r) Pellet Cooler #2 (Unit ID 201-04-G), installed October 2000. Particulate emissions are controlled by a cyclone (CE201-04-G) that exhausts to stack S201-04-G.
- (s) Central Vacuum Pelletizing (Unit ID 201-06-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE201-06-G) that exhausts to stack S201-06-G.
- (t) Central Vacuum Loadout (Unit ID 200-07-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-07-G) that exhausts to stack S200-07-G.
- (u) Pellet Silo #1 (Unit ID 200-01-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-01-G) that exhausts to stack S200-01-G.
- (v) Pellet Silo #2 (Unit ID 200-02-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-02-G) that exhausts to stack S200-02-G.
- (w) Loose Feed Silo (Unit ID 200-06-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-06-G) that exhausts to stack S200-06-G.
- (x) Gluten Silo (Unit ID 200-04-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-04-G) that exhausts to stack S200-04-G.
- (y) Germ Silo (Unit ID 200-03-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-03-G) that exhausts to stack S200-03-G.
- (z) Bulk Loadout (Unit ID 200-05-G), installed October 2000. Particulate emissions are controlled by a dust collector (CE200-05-G) that exhausts to stack S200-05-G.
- (aa) Corn Dump Pit (Unit ID 140-05-G), installed December 1995. Particulate emissions are controlled by a filter baghouse (CE140-05-G) that exhausts to stack S140-05-G.
- (bb) Corn Elevator Conveying (Unit ID 140-07-G), installed December 1995. Material is transferred from corn belt 1 to corn belt 2. Particulate emissions are controlled by a filter baghouse (CE140-07-G) that exhausts to stack S140-07-G.
- (cc) Corn Receiving and Storage, installed December 1995. This system includes six Storage Bins, each with its own bin vent for control of particulate emissions:
 - Bin #1: Unit ID 140-01-G
 - Bin #2: Unit ID 140-02-G
 - Bin #3: Unit ID 140-03-G
 - Bin #4: Unit ID 140-04-G
 - Bin #5: Unit ID 33-01-G
 - Bin #6: Unit ID 33-02-G

(dd) Gravity Take-up Conveyor (Corn Scale System) (Unit ID 140-06-G), installed December 1995. Corn is transferred from corn belt 2 to corn belt 3. Particulate emissions are controlled by a filter baghouse (CE140-06-G) that exhausts to stack S140-06-G.

(ee) Corn Cleaner (Unit ID 33-03-G), installed December 1995. Corn passes through mechanical cleaners. Particulate emissions are controlled by a filter baghouse (CE33-03-G) that exhausts to stack S33-03-G.

(ff) Corn Screenings System (Unit ID 30-16-G), installed July 1976. This system includes a dirt storage silo equipped with a bag filter collector (CE30-16-G) that exhausts to stack S30-16-G.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

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

D.3.1 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6-1-10.1(d)]

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (d), emissions of particulate matter less than ten microns in diameter (PM10) shall be limited to the following.

	Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
(a)	Gluten Dryer System (121-01-G)	0.03	3.0
(b)	First Stage Germ Dryer Receiver (21A-01-G)	0.015	0.12
(c)	First Stage Germ Dryer Exhaust (21A-02-G)	0.01	0.67
(d)	Second Stage Germ Dryer Receiver (51A-01-G)	0.02	0.19
(e)	Second Stage Germ Dryer Exhaust (51A-02-G)	0.015	1.01
(f)	Fiber Drying Equipment (89-01-G)	0.01	4.5
(g)	Rotary Feed Dryer (89-03-G)	0.03	4.5
(i)	Waxy Feed Drum Dryer (124-01-G)	0.03	11.12
(j)	Germ Storage Silo (121-14-G)	0.01	0.1
(k)	Germ Dryer/Cooler (124A-01-G)	0.02	1.872
(l)	Waxy Feed Mill Equipment (124-22-G)	0.01	0.051
(aa)	Corn Dump Pit (140-05-G)	0.01	1.286
(bb)	Corn Elevator Conveying (140-07-G)	0.01	0.086
(cc)	Corn Receiving and Storage Bins 1, 2, 3, & 4	0.02 each	0.343 each
(cc)	Corn Receiving and Storage Day Tanks 5 & 6	0.02 each	0.171 each
(dd)	Gravity Take-up Conveyor (140-06-G)	0.01	0.154
(ee)	Corn Cleaner (33-03-G)	0.01	0.21
(ff)	Corn Screenings System (30-16-G)	0.01	0.06

D.3.2 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6-1-2(h)]

Pursuant to Significant Source Modification 089-14389-00203, issued September 2001, and 326 IAC 6-1-2(h) (Nonattainment Area Particulate Limitations), emissions of particulate matter less than ten (10) microns in diameter (PM10) from the following units shall not exceed the following limitations:

	Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
(h)	Dry Feed Transfer (89-05-G)	0.01	0.09
(m)	Corn Screen to Grind 2 Wet Feed Transfer	0.01	0.086
(n)	Loose Feed Bin (201-05-G)	0.005	0.02
(o)	Hammermill #1 (201-01-G)	0.005	0.15
(p)	Hammermill #2 (201-02-G)	0.005	0.15
(q)	Pellet Cooler #1 (Unit ID 201-03-G)	0.015	1.66
(r)	Pellet Cooler #2 (Unit ID 201-04-G)	0.015	1.66
(s)	Central Vacuum Pelletizing (201-06-G)	0.005	0.02
(t)	Central Vacuum Loadout (200-07-G)	0.005	0.02
(u)	Pellet Silo #1 (200-01-G)	0.005	0.003
(v)	Pellet Silo #2 (200-02-G),	0.005	0.003
(w)	Loose Feed Silo (200-06-G)	0.005	0.02
(x)	Gluten Silo (200-04-G)	0.005	0.05
(y)	Germ Silo (200-03-G)	0.005	0.05
(z)	Bulk Loadout (200-05-G)	0.005	1.21

D.3.3 VOC Emissions [326 IAC 2-3] [326 IAC 8-1-6] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 2-3 (Emission Offset) and/or 326 IAC 8-1-6 (New facilities, general reduction requirements (BACT)). Therefore, the Permit Shield provided by Condition B.12 of this permit does not apply to those emission units with regards to 326 IAC 2-3 and 326 IAC 8-1-6. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-3 or 326 IAC 8-1-6 and a schedule for achieving compliance with such requirements.

D.3.4 VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties). Therefore, the Permit Shield provided by Condition B.12 of this permit does not apply to those emission units with regards to 326 IAC 8-7. On February 27, 1995, the source submitted to IDEM, OAQ a Reasonably Achievable Control Technology (RACT) plan pursuant to 326 IAC 8-7-2. A revised RACT plan was requested and submitted by the source on August 22, 2003. The IDEM, OAQ is currently reviewing the RACT plan submitted. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 8-7 and a schedule for achieving compliance with such requirements.

D.3.5 SO₂ Emissions [326 IAC 2-3] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 2-3 (Emission Offset). Therefore, the Permit Shield provided by Condition B.12 of this permit does not apply to those emission units with regards to 326 IAC 2-3. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-3 and a schedule for achieving compliance with such requirements.

D.3.6 Volatile Organic Compounds [326 IAC 8-1-6]

Pursuant to Significant Source Modification 089-14389-00203, issued September 2001, and 326 IAC 8-1-6, the Thermal Oxidizer for the Rotary Feed Dryer shall achieve a 90% reduction of VOC emissions.

D.3.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for each Grind and Feedhouse Area facility control device.

Compliance Determination Requirements

D.3.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 36 months of the issuance of this permit, in order to demonstrate compliance with Conditions D.3.1 and D.3.2, the Permittee shall perform PM-10 testing on the following units utilizing methods as approved by the Commissioner.

- (a) Gluten Ring Dryer
- (b) Fiber Drying Equipment/Rotary Feed Dryer System

These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

D.3.9 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6-1-10.1(d)] [326 IAC 6-1-2(h)]

In order to comply with D.3.1 and D.3.2, the control devices for PM10 control shall be in operation and control emissions from their associated facilities at all times that the facilities are in operation.

D.3.10 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

The thermal oxidizer for VOC control shall be in operation and control emissions from the Rotary Feed Dryer at all times that the facility is in operation. The thermal oxidizer shall maintain a minimum operating temperature of 1200°F and a maximum flow rate of 35,000 acfm.

D.3.11 Parametric Monitoring (Thermal Oxidizer) [326 IAC 8-1-6]

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The thermal oxidizer shall maintain a minimum operating temperature of 1200°F and a maximum flow rate of 35,000 acfm.
- (b) During normal operation, 100% of the gas stream from the Rotary Feed Dryer shall be captured and shall pass through the Thermal Oxidizer.
- (c) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the reading is outside the above-mentioned range for any one reading. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

Compliance Monitoring Requirements

D.3.12 Visible Emissions Notations

- (a) Visible emission notations of each Grind and Feedhouse facility stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.3.13 Parametric Monitoring (Dust Collectors)

The Permittee shall record the total static pressure drop across each particulate control device used in the Grind and Feedhouse Area at least once per day when the associated system is in operation. When for any one reading, the pressure drop across the control device is outside any of the following ranges or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM-OAQ and HDEM and shall be calibrated at least once every six (6) months or in accordance with the manufacturer's specifications provided those specifications are available on site with the Preventive Maintenance Plan.

D.3.14 Parametric Monitoring (Scrubbers)

The Permittee shall record the recirculation liquid flow rate and total static pressure drop across each scrubber used in the Grind and Feedhouse Area, at least once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the following ranges or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

	Unit ID	Control Equipment	Pressure Drop Range (inches of water)
(a)	Gluten Ring Dryer System (121-01-G)	Wet Scrubber	9 - 15
(b)	First Stage Germ Dryer Receiver (21A-01-G)	Cyclone	N/A
(c)	First Stage Germ Dryer Exhaust (21A-02-G)	Cyclone and Roto-clone	N/A
(d)	Second Stage Germ Dryer Receiver (51A-01-G)	Cyclone	N/A
(e)	Second Stage Germ Dryer Exhaust (51A-02-G)	Scrubber	TBD
(f)	Fiber Drying Equipment (89-01-G)	Scrubber	0.1 - 6
(g)	Rotary Feed Dryer (89-03-G)	4 Cyclones	N/A
(h)	Dry Feed Transfer (89-05-G)	Dust Collector	0.1 - 6
(i)	Waxy Feed Drum Dryer (124-01-G)	Wet Scrubber	TBD
(j)	Germ Storage Silo (121-14-G)	Dust Collector	0.1 - 6
(k)	Germ Dryer/Cooler (124A-01-G)	4 Cyclones	N/A
(l)	Waxy Feed Mill Equipment (124-22-G)	Dust Collector	0.1 - 6
(m)	Corn Screen to G2 Wet Feed Transfer (124-23-G)	Dust Collector	0.1 - 6
(n)	Loose Feed Bin Vent (201-05-G)	Bin Vent Filter	0.1 - 6
(o)	Hammermill #1 (201-01-G)	Dust Collector	0.1 - 6
(p)	Hammermill #2 (201-02-G)	Dust Collector	0.1 - 6
(q)	Pellet Cooler #1 (201-03-G)	Cyclone	N/A
(r)	Pellet Cooler #2 (201-04-G)	Cyclone	N/A
(s)	Central Vacuum Pelletizing (201-06-G)	Dust Collector	0.1 - 6
(t)	Central Vacuum Loadout (200-07-G)	Dust Collector	0.1 - 6
(u)	Pellet Silo #1 (200-01-G)	Dust Collector	0.1 - 6
(v)	Pellet Silo #2 (200-02-G)	Dust Collector	0.1 - 6
(w)	Loose Feed Silo (200-06-G)	Dust Collector	0.1 - 6
(x)	Gluten Silo (200-04-G)	Dust Collector	0.1 - 6
(y)	Germ Silo (200-03-G)	Dust Collector	0.1 - 6
(z)	Bulk Loadout (200-05-G)	Dust Collector	0.1 - 6
(aa)	Corn Dump Pit (140-05-G)	Dust Collector	0.1 - 6
(bb)	Corn Elevator Conveying (140-07-G)	Dust Collector	0.1 - 6
(cc)	Corn Receiving and Storage Silos (6)	Bin Vents	NA
(dd)	Gravity Take-up Conveyor (140-06-G)	Dust Collector	0.1 - 6
(ee)	Corn Cleaner (33-03-G)	Dust Collector	0.1 - 6
(ff)	Corn Screenings System (30-16-G)	Dust Collector	0.1 - 6

D.3.15 Baghouse (Dust Collector) Inspections

An inspection shall be performed each calendar quarter of all bags that control particulate emissions. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.3.16 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, or dust traces, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.3.17 Cyclone Inspections

An inspection shall be performed each calendar quarter of all cyclones used as control devices.

D.3.18 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.3.19 Scrubber Inspections

An inspection shall be performed each calendar quarter of all scrubbers used as control devices. Defective scrubber parts shall be replaced. A record shall be kept of the results of the inspection and any corrective actions taken.

D.3.20 Scrubber Failure Detection

In the event that a scrubber's failure has been observed:

- (a) The affected unit will be shut down immediately until the failed unit has been replaced.
- (b) Based on the confirmed findings of an inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

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

D.3.21 Record Keeping Requirements

- (a) To document compliance with Condition D.3.12, the Permittee shall maintain records of visible emission notations of the Grind and Feedhouse Area Facility stack exhausts.
- (b) To document compliance with Condition D.3.13 and D.3.14, the Permittee shall maintain daily records of the total static pressure drop readings and the scrubber recirculation liquid flow rates.
- (c) To document compliance with Condition D.3.11, the Permittee shall record the thermal oxidizer operating temperature once per day when the unit is operating. The Permittee shall also have a record of the operating temperature used to demonstrate compliance during the most recent compliance stack test.
- (d) To document compliance with Condition D.3.15, D.3.17, and D.3.19, the Permittee shall maintain records of the results of the inspections.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:	<u>IV. Utility Area</u>
<p>The Utility area includes six (6) boilers used to supply steam for plant processes. A small rental, natural gas-fired boiler is used when all boilers are down for maintenance.</p>	
<p>(a) Boiler No. 1 (Unit ID 10-01-U), Combustion Engineering Model VP10R, installed in 1960, with a maximum rate of 96 MMBtu/hr heat input and natural gas-fired only. This unit exhausts through stack S10-01-U.</p>	
<p>(b) Boiler No. 2 (Unit ID 10-02-U), Erie City Model 19M, installed in 1966, with a maximum rate of 160 MMBtu/hr heat input and natural gas-fired only. This unit exhausts through stack S10-02-U.</p>	
<p>(c) Boiler No. 6 (Unit ID 10-03-U), Combustion Engineering Model VU-50, installed in 1956, with a maximum rate of 200 MMBtu/hr heat input and natural gas-fired with a fuel oil #6 secondary capability. This unit exhausts through stack S10-03-U.</p>	
<p>(d) Boiler No. 7 (Unit ID 10-04-U), Combustion Engineering Model VU, installed in 1944, with a maximum rate of 120 MMBtu/hr heat input and natural gas-fired with a fuel oil #6 secondary capability. This unit also exhausts through stack S10-03-U.</p>	
<p>(e) Boiler No. 8 (Unit ID 10-05-U), Combustion Engineering Model VU, installed in 1937, with a maximum rate of 120 MMBtu/hr heat input and natural gas-fired with a fuel oil #6 secondary capability. This unit exhausts through stack S10-05-U.</p>	
<p>(f) Boiler No. 10 (Unit ID 10-06-U), Combustion Engineering Model VU, installed in 1937, with a maximum rate of 120 MMBtu/hr heat input and natural gas-fired with a fuel oil #6 secondary capability. This unit also exhausts through stack S10-05-U.</p>	
<p>(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)</p>	

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

D.4.1 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6-1-10.1(h)]

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (h), Boilers #1 and #2 shall fire natural gas only and emissions of particulate matter less than ten microns in diameter (PM10) shall be limited to the following.

Unit ID	PM10 Limit (lbs/MMBtu)	PM10 Limit (lbs/hr)
Boiler #1	0.003	0.288
Boiler #2	0.003	0.468

D.4.2 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6-1-10.1(d)]

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (d), emissions of particulate matter less than ten microns in diameter (PM10) shall be limited to the following.

Unit ID	PM10 Limit
Stack Serving Boilers 6 & 7	30.3 lbs/hr
Stack Serving Boilers 8 & 10	22.7 lbs/hr

D.4.3 Sulfur Dioxide (SO₂) [326 IAC 7-4-1.1]

Pursuant to 326 IAC 7-4-1.1 (Lake County Sulfur Dioxide Emission Limitations) sulfur dioxide emissions are limited to 2.07 lbs/MMBtu (each) for boilers 6, 7, 8, and 10 (784 lbs/hr total).

D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for each Utility Area Boiler.

Compliance Determination Requirements

D.4.5 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7-4]

Compliance with Condition D.4.3 shall be determined utilizing one of the following options:

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions from boilers 6, 7, 8, and 10 do not exceed (2.07) pound per million Btu heat input (each) by:
 - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the boilers using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements

D.4.6 Visible Emissions Notations

- (a) Visible emission notations of each boiler stack exhaust shall be performed once per day (when burning fuel oil) during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) A continuous opacity monitor may be used to perform the visible emission notations provided the calibration and maintenance procedures for the monitor have been approved by the IDEM-OAQ or the HDEM. A trained employee shall record whether emissions are normal or abnormal (when burning fuel oil).
- (f) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

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

D.4.7 Record Keeping Requirements

- (a) In accordance with 326 IAC 7-4-1.1(c)(1)(B)(i) and in order to document compliance with Condition D.4.3, the Permittee shall maintain records of the following for each hour in which any boiler operates on fuel oil.
 - (1) Average sulfur content
 - (2) Fuel oil usage
 - (3) Boiler operating load
- (b) To document compliance with Condition D.4.6, the Permittee shall maintain records of the visible emission notations (while burning fuel oil) of the boiler stack exhausts.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.8 Reporting Requirements

- (a) In accordance with 326 IAC 7-2-1(c)(3) and 326 IAC 7-4-1.1(c)(1)(B)(ii), the Permittee shall submit a report to the department within thirty (30) days after the end of each calendar quarter. The report shall also contain the records required in Condition D.4.7 for Boilers 6, 7, 8, and 10, while burning fuel oil, including a calculation of the total sulfur dioxide emissions from all boilers for each hour.
- (b) The natural gas boiler certification shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or its equivalent, within thirty (30) days after the end of the calendar quarter being reported. The natural gas-fired boiler certification does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:	<u>V. Refinery Area</u>
<p>(a) Corn Syrup Solids Manufacturing System #2 (Unit ID 18-03-R), installed July 1992. Corn syrup solids are fed through a cooling tunnel, milled, screened, and dropped to a receiver for packing. Particulate emissions are controlled by a jet pulse dust collector (CE18-03-R) that exhausts to stack S18-03-R.</p>	
<p>(b) Corn Syrup Spray Dryer #4 (Unit ID 100-03-R), installed April 1992. Corn syrup is fed to a dryer. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet scrubber (CE100-03-R) that exhausts to stack S100-03-R.</p>	
<p>(c) Corn Syrup Spray Dryer/Cooler System #3 (Unit ID 100-01-R), installed July 1987. Corn syrup is fed to a dryer. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet venturi scrubber (CE100-01-R) that exhausts through stack S100-01-R.</p>	
<p>(d) Activated Carbon Regeneration Furnace #2 (Unit ID 104-01-R), installed July 1995. Spent carbon is regenerated in this natural gas-fired furnace. Emissions are controlled by a venturi scrubber and an impingement furnace scrubber (CE104-01-R) that exhaust through stack S104-01-R.</p>	
<p>(e) Soda Ash Tank (Unit ID 104-02-R), installed July 1995. Particulate emissions from loading this tank are controlled by a venturi scrubber (CE104-02-R) that exhausts to stack S104-02-R.</p>	
<p>(f) Filter Aid Hopper (Unit ID 104-03-R), installed July 1995. This hopper is equipped with a jet pulse baghouse (CE104-03-R) that exhausts to stack S104-03-R.</p>	
<p>(g) Sodium Bisulfite Bag Dump (Unit ID 104-05-R), installed July 1995. This unit is controlled by a jet pulse baghouse (CE104-05-R) that exhausts to stack S104-05-R.</p>	
<p>(h) Diatomaceous Earth Unloading (Unit ID 104-08-R), installed November 1998. Diatomaceous earth (filter aid) is unloaded from railcar to Silo. Particulate emissions are controlled by a Bin Vent Filter (DC2312) that exhausts to stack S104-08-R.</p>	
<p>(i) Citric Acid Dump Station (Unit ID 104-09-R), installed November 1998. Citric Acid is added during the production of corn syrup. Particulate emissions are controlled by a dust collector (CE104-09-R) that exhausts to stack S104-09-R.</p>	
<p>(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)</p>	

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

D.5.1 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6-1-10.1(d)]

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (d), emissions of particulate matter less than ten microns in diameter (PM10) shall be limited to the following:

	Unit ID	PM10 Limit	PM10 Limit
(a)	Corn Syrup Solids Mfg System #2 (18-03-R)	0.01	0.30
(b)	Corn Syrup Spray Dryer #4 (100-03-R)	0.01	4.2
(c)	Corn Syrup Spray Dryer/Cooler System #3 (100-01-R)	0.015	4.96
(d)	Activated Carbon Regeneration Furnace #2 (104-01-R)	0.015	0.728

(e)	Soda Ash Tank (104-02-R)	0.02	0.154
(f)	Filter Aid Hopper (104-03-R)	0.02	0.044
(g)	Sodium Bisulfite Bag Dump (104-05-R)	0.02	0.080

D.5.2 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6-1-2(h)]

Pursuant to CP 089-1230-00203, issued November 1998, and 326 IAC 6-1-2 (Nonattainment Area Particulate Limitations), subsection (h), emissions of particulate matter less than ten microns in diameter (PM10) shall be limited to the following:

	Unit ID	PM10 Limit	PM10 Limit
(h)	Diatomaceous Earth Unloading Silo (104-08-R)	0.01	0.064
(i)	Citric Acid Dump Station (104-09-R)	0.01	0.026

D.5.3 VOC Emissions [326 IAC 2-3] [326 IAC 8-1-6] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 2-3 (Emission Offset) and/or 326 IAC 8-1-6 (New facilities, general reduction requirements (BACT)). Therefore, the Permit Shield provided by Condition B.12 of this permit does not apply to those emission units with regards to 326 IAC 2-3 and 326 IAC 8-1-6. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-3 or 326 IAC 8-1-6 and a schedule for achieving compliance with such requirements.

D.5.4 VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties). Therefore, the Permit Shield provided by Condition B.12 of this permit does not apply to those emission units with regards to 326 IAC 8-7. On February 27, 1995, the source submitted to IDEM, OAQ a Reasonably Achievable Control Technology (RACT) plan pursuant to 326 IAC 8-7-2. A revised RACT plan was requested and submitted by the source on August 22, 2003. The IDEM, OAQ is currently reviewing the RACT plan submitted. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 8-7 and a schedule for achieving compliance with such requirements.

D.5.5 CO Emissions [326 IAC 2-2] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration). Therefore, the Permit Shield provided by Condition B.12 of this permit does not apply to those emission units with regards to 326 IAC 2-2 (PSD). The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-2 (PSD) and a schedule for achieving compliance with such requirements.

D.5.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.5.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 36 months of the issuance of this permit, in order to demonstrate compliance with Condition D.5.1, the Permittee shall perform PM-10 testing on the following units utilizing methods as approved by the Commissioner.

- (a) Corn Syrup Spray Dryer #4
- (b) Corn Syrup Spray Dryer/Cooler #3

These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

D.5.8 Particulate Matter less than 10 microns in diameter (PM10)

In order to comply with D.5.1 and D.5.2, the control devices for PM10 control shall be in operation and control emissions from each facility at all times that the facility is in operation.

Compliance Monitoring Requirements

D.5.9 Visible Emissions Notations

- (a) Visible emission notations of each Refinery Area facility stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.5.10 Parametric Monitoring (Dust Collectors)

The Permittee shall record the total static pressure drop across the control device used in conjunction with each Refinery Area facility as listed below, at least once per day, when the associated facility is in operation. When for any one reading, the pressure drop across the baghouse or dust collector is outside any of the following ranges or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit.

Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM-OAQ and HDEM and shall be calibrated at least once every six (6) months or in accordance with the manufacturer's specifications provided those specifications are available on site with the Preventive Maintenance Plan.

D.5.11 Parametric Monitoring (Scrubbers)

The Permittee shall record the recirculation liquid flow rate and total static pressure drop across each scrubber used in the Refinery Area, at least once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the following ranges or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

	Unit ID	Control Equipment	Pressure Drop Range (inches of water)
(a)	Corn Syrup Solids Mfg System #2 (18-03-R)	Dust Collector	5 - 15
(b)	Corn Syrup Spray Dryer #4 (100-03-R)	Wet Scrubber	0.1 - 7
(c)	Corn Syrup Spray Dryer/Cooler System #3 (100-01-R)	Wet Scrubber	0.1 - 6
(d)	Activated Carbon Regeneration Furnace #2 (104-01-R)	Wet Scrubber	TBD
(e)	Soda Ash Tank (104-02-R)	Wet Scrubber	0.25 – 0.5
(f)	Filter Aid Hopper (104-03-R)	Dust Collector	0.1 - 6
(g)	Sodium Bisulfite Bag Dump (104-05-R)	Dust Collector	0.1 - 6
(h)	Diatomaceous Earth Unloading Silo (104-08-R)	Bin Vent Filter	0.1 - 6
(i)	Citric Acid Dump Station (Unit ID 104-09-R).	Dust Collector	0.1 - 6

D.5.12 Baghouse (Dust Collector) Inspections

An inspection shall be performed each calendar quarter of all bags that control particulate emissions. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.5.13 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with

Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, or dust traces, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.5.14 Scrubber Inspections

An inspection shall be performed each calendar quarter of all scrubbers used as control devices. Defective scrubber parts shall be replaced. A record shall be kept of the results of the inspection and any corrective actions taken.

D.5.15 Scrubber Failure Detection

In the event that a scrubber's failure has been observed:

- (a) The affected unit will be shut down immediately until the failed unit has been replaced.
- (b) Based on the confirmed findings of an inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

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

D.5.16 Record Keeping Requirements

- (a) To document compliance with Condition D.5.9, the Permittee shall maintain records of the visible emission notations of the Refinery Area Facility stack exhausts.
- (b) To document compliance with Conditions D.5.10 and D.5.11, the Permittee shall maintain a daily record of the total static pressure drop readings and the scrubber recirculation liquid flow rates.
- (c) To document compliance with Condition D.5.12 and D.5.14, the Permittee shall maintain records of the results of the inspections.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.6

FACILITY OPERATION CONDITIONS

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

VI. Starch Production Area

- (a) Batch Scale Hopper #1 (Unit ID 34-01-S), installed January 1991. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-01-S) that exhausts to stack S34-01-S.
- (b) Dextrin Starch Reactor #1 (Unit ID 34-02-S), installed January 1991. Dried cornstarch is fed to a reactor heated by steam from the plant boilers. Particulate emissions are controlled by a bag filter dust collector (CE34-02-S) that exhausts to stack S34-02-S.
- (c) Dextrin Starch Cooler #1 (Unit ID 34-03-S), installed January 1991. Roasted cornstarch is fed to a cooler and transferred to a hopper for storage. Particulate emissions are controlled by a bag filter dust collector (CE34-03-S) that exhausts to stack S34-03-S.
- (d) Surge Hopper #1 (Unit ID 34-05-S), installed January 1991. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-05-S) that exhausts to stack S34-05-S.
- (e) Dextrin Feed Hoppers #1 and #2 (System #1) (Unit IDs 34-06-S and 34-07-S), installed April 1993. Starch is gravity conveyed to these hoppers. Particulate emissions are controlled by bag filter dust collectors (CE34-06-S and CE34-07-S) that exhaust to stacks S34-06-S and S34-07-S.
- (f) Batch Scale Hopper #2 (Unit ID 34B-13-S), installed October 1993. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34B-13-S) that exhausts to stack S34B-13-S.
- (g) Dextrin Starch Reactor #2 (Unit ID 34B-04-S), installed October 1993. Dried cornstarch is fed to a reactor heated by steam from the plant boilers. Particulate emissions are controlled by a bag filter dust collector (CE34B-04-S) that exhausts to stack S34B-04-S.
- (h) Dextrin Starch Cooler #2 (Unit ID 34B-01-S), installed October 1993. Roasted cornstarch is fed to a cooler and transferred to a hopper for storage. Particulate emissions are controlled by a bag filter dust collector (CE34B-01-S) that exhausts to stack S34B-01-S.
- (i) Surge Hopper #2 (Unit ID 34B-03-S), installed October 1993. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34B-03-S) that exhausts to stack S34B-03-S.
- (j) Dextrin Feed Hoppers #3 and #4 (System #2) (Unit IDs 34B-05-S and 34B-06-S), installed October 1993. Starch is gravity conveyed to these hoppers. Particulate emissions are controlled by dust collectors (CE34B-05-S and CE34B-06-S) that exhaust to stacks S34B-05-S and S34B-06-S.
- (k) Dextrin Bulk Loading Equipment (Unit ID 48-09-S), installed before 1977. Starch is pneumatically conveyed to this hopper. Particulate emissions are controlled by a bag filter dust collector (CE48-09-S) that exhausts to stack S48-09-S.
- (l) Starch Ring Dryer #2 (Unit ID 59-03-S), installed November 1993. Starch is fed to this natural gas-fired ring dryer. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE59-03-S) that exhausts to stack S59-03-S.

- (m) Starch Milling Systems #1 and #2 (Unit IDs 59-01-S and 59-02-S), installed July 1976. Dried cornstarch is milled and transferred to storage. Particulate emissions are controlled by bag filter dust collectors (CE59-01-S and CE59-02-S) that exhaust to stacks S59-01-S and S59-02-S.
- (n) Starch Ring Dryer #3 (Unit ID 125-01-S), installed May 1980. Corn starch is fed to this natural gas-fired ring dryer. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE125-01-S) that exhausts to stack S125-01-S.
- (o) Special Starch Process with Starch Ring Dryer #4 (Unit ID 128-01-S), installed December 1993. Corn starch is fed to this natural gas-fired ring dryer. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by wet scrubber (CE128-01-S) that exhausts to stack S128-01-S.
- (p) Reactors #1 through 8 (Unit IDs 128-06-S through 128-13-S) installed November 1988 (1-4) and December 1991 (5-8). Corn starch and propylene oxide are reacted through Reactors 2, 3, 4, and 7 only. When propylene oxide is used in the starch reaction, VOC emissions are controlled by a thermal oxidizer that exhausts to stack S128-14-S.
- (q) Sodium Sulfate Storage Bin (Unit ID 128-25-S), installed October 2000. Particulate emissions are controlled by a bin vent dust collector (FA1900) that exhausts to stack S128-25-S.
- (r) Sodium Sulfate Weigh Bin (Unit ID 128-26-S), installed October 2000. Particulate emissions are controlled by a bin vent dust collector (FA1950) that exhausts to stack S128-26-S.
- (s) Cornstarch Storage Bins #20 through #36 (Unit IDs 120-01-S through 120-17-S), installed July 1990. Cornstarch is pneumatically conveyed to these storage bins. Particulate emissions are controlled by bin vent dust collectors that exhaust to stacks S120-01-S through S120-17-S.
- (t) Waxy Cornstarch Bulk Storage Bins #95 through #98 (Unit IDs 126-01-S through 126-04-S), replaced in January 1996. Waxy corn starch is conveyed to these bins. Particulate emissions are controlled by dust collectors (CE126-01-S through CE126-04-S) that exhaust to stacks S126-01-S through S126-04-S.
- (u) Cornstarch Blending Systems #1 through #4 (Unit IDs 130-01-S through 130-04-S), installed April 1988. Corn starch is blended and moved to the warehouse for packing. Particulate emissions are controlled by bag filter dust collectors (CE130-01-S through CE130-04-S) that exhaust to stacks S130-01-S through S130-04-S.
- (v) Dextrin Blender (Unit ID 130-05-S), installed October 1993. Corn starch is blended and moved to the warehouse for packing. Particulate emissions are controlled by a dust collector (CE130-05-S) that exhausts to stack S130-05-S.
- (w) One (1) 28,000 gallon horizontal propylene oxide tank (Unit ID 93-18-S), installed 1988, with 95% efficient vapor recovery (liquid nitrogen condenser). This tank also provides propylene oxide for other starch processes.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

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

D.6.1 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6-1-10.1(d)]

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (d), emissions of particulate matter less than ten microns in diameter (PM10) shall be limited to the following.

	Unit ID	PM10 Limit	PM10 Limit
(a)	Batch Scale Hopper #1 (34-01-S)	0.01	0.04
(b)	Dextrin Starch Reactor #1 (34-02-S)	0.01	0.180
(c)	Dextrin Starch Cooler #1 (34-03-S)	0.01	0.042
(d)	Surge Hopper #1 (34-05-S)	0.01	0.11
(e)	Dextrin Feed Hoppers #1 and #2 (34-06-S & 34-07-S)	0.01 each	0.030 each
(f)	Batch Scale Hopper #2 (34B-13-S)	0.01	0.067
(g)	Dextrin Starch Reactor #2 (34B-04-S)	0.01	0.179
(h)	Dextrin Starch Cooler #2 (34B-01-S)	0.01	0.042
(i)	Surge Hopper #2 (34B-03-S)	0.01	0.114
(j)	Dextrin Feed Hoppers #3 and #4 (34B-05-S & 34B-06-S)	0.01 each	0.030 each
(k)	Dextrin Bulk Loading Equipment (48-09-S)	0.01	0.26
(l)	Starch Ring Dryer #2 (59-03-S)	0.006	3.50
(m)	Starch Milling Systems #1 and #2 (59-01-S and 59-02-S)	0.01 each	0.43 each
(n)	Starch Ring Dryer #3 (125-01-S)	0.006	3.50
(o)	Special Starch Process / Starch Ring Dryer #4 (128-01-S)	0.01	3.5
(s)	Cornstarch Storage Bins 20-36 (120-01-S to 120-17-S)	0.01 each	0.56 each
(t)	Waxy Cornstarch Storage Bins 95-98 (126-01-S to 126-04-S)	0.01 each	0.16 each
(u)	Cornstarch Blending Systems 1-4 (130-01-S to 130-04-S)	0.01	0.42
(v)	Dextrin Blender (130-05-S)	0.01	0.248

D.6.2 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6-1-2(h)]

Pursuant to CP 089-01531-00203, issued November 1999, and 326 IAC 6-1-2 (Non-attainment Area Particulate Limitations), subsection (h), emissions of particulate matter less than ten microns in diameter (PM10) shall be limited to the following.

	Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
(q)	Sodium Sulfate Storage Bin (128-25-S)	0.005	0.03
(r)	Sodium Sulfate Weigh Bin (128-26-S)	0.005	0.03

D.6.3 VOC Emissions [326 IAC 2-3] [326 IAC 8-1-6] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 2-3 (Emission Offset) and/or 326 IAC 8-1-6 (New facilities, general reduction requirements (BACT)). Therefore, the Permit Shield provided by Condition B.12 of this permit does not apply to those emission units with regards to 326 IAC 2-3 and 326 IAC 8-1-6. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-3 or 326 IAC 8-1-6 and a schedule for achieving compliance with such requirements.

D.6.4 VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties). Therefore, the Permit Shield provided by Condition B.12 of this permit does not apply to those emission units with regards to 326 IAC 8-7. On February 27, 1995, the source submitted to IDEM, OAQ a Reasonably Achievable Control Technology (RACT) plan pursuant to 326 IAC 8-7-2. A revised RACT plan was requested and submitted by the

source on August 22, 2003. The IDEM, OAQ is currently reviewing the RACT plan submitted. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 8-7 and a schedule for achieving compliance with such requirements.

D.6.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.6.6 Testing Requirements (PM10) [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 36 months of the issuance of this permit, in order to demonstrate compliance with Condition D.6.1, the Permittee shall perform PM-10 testing on the following units utilizing methods as approved by the Commissioner.

- (1) Starch Ring Dryer #2
- (2) Starch Ring Dryer #3
- (3) Special Starch Process w/ Starch Ring Dryer #4

These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C-Performance Testing.

D.6.7 Volatile Organic Compounds (VOC) [326 IAC 2-1.1-5] [326 IAC 8-7-9] [326 IAC 8-7-10]

The thermal oxidizer for VOC control for Reactors 2, 3, 4, and 7 shall be installed, calibrated, maintained, and operated, at a minimum, according to the manufacturer's specifications and recommendations.

D.6.8 Particulate Matter less than 10 microns in diameter (PM10)

In order to comply with D.6.1 and D.6.2, the control devices for PM10 control shall be in operation and control emissions from each facility at all times that the facility is in operation.

Compliance Monitoring Requirements

D.6.9 Visible Emissions Notations

- (a) Visible emission notations of each Starch Production Area facility stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.6.10 Parametric Monitoring (Dust Collectors)

The Permittee shall record the total static pressure drop across the control device used in conjunction with each Starch Production Area facility as listed below, at least once per day when the associated facility is in operation. When for any one reading, the pressure drop across the baghouse or dust collector is outside any of the following ranges or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM-OAQ and HDEM and shall be calibrated at least once every six (6) months or in accordance with the manufacturer's specifications provided those specifications are available on site with the Preventive Maintenance Plan.

	Unit ID	Control Equipment	Pressure Drop Range
(a)	Batch Scale Hopper #1 (34-01-S)	Dust Collector	0.1 - 6
(b)	Dextrin Starch Reactor #1 (34-02-S)	Dust Collector	0.1 - 6
(c)	Dextrin Starch Cooler #1 (34-03-S)	Dust Collector	0.1 - 6
(d)	Surge Hopper #1 (34-05-S)	Dust Collector	0.1 - 6
(e)	Dextrin Feed Hoppers #1 and #2 (34-06-S & 34-07-S)	Dust Collectors	0.1 – 6 each
(f)	Batch Scale Hopper #2 (34B-13-S)	Dust Collector	0.1 - 6
(g)	Dextrin Starch Reactor #2 (34B-04-S)	Dust Collector	0.1 - 6
(h)	Dextrin Starch Cooler #2 (34B-01-S)	Dust Collector	0.1 - 6
(i)	Surge Hopper #2 (34B-03-S),	Dust Collector	0.1 - 6
(j)	Dextrin Feed Hoppers #3 and #4 (34B-05-S & 34B-06-S)	Dust Collector	0.1 – 6 each
(k)	Dextrin Bulk Loading Equipment (48-09-S)	Dust Collector	0.1 - 6
(l)	Starch Ring Dryer #2 (59-03-S)	Wet Scrubber	10 - 20
(m)	Starch Milling Systems #1 and #2 (59-01-S and 59-02-S)	Dust Collectors	0.1 - 6 each
(n)	Starch Ring Dryer #3 (125-01-S)	Wet Scrubber	5 - 17
(o)	Special Starch Process / Starch Ring Dryer #4 (128-01-S)	Wet Scrubber	0.1 - 10
(q)	Sodium Sulfate Storage Bin (128-25-S)	Dust Collector	0.1 - 6
(r)	Sodium Sulfate Weigh Bin (128-26-S)	Dust Collector	0.1 - 6
(s)	Cornstarch Storage Bins 20-36 (120-01-S to 120-17-S)	Dust Collectors	0.1 - 6 each
(t)	Waxy Cornstarch Storage Bins 95-98 (126-01-S to 126-04-S)	Dust Collectors	0.1 - 6 each
(u)	Cornstarch Blending Systems 1-4 (130-01-S to 130-04-S)	Dust Collectors	0.1 - 6 each
(v)	Dextrin Blender (130-05-S)	Dust Collector	0.1 - 6

D.6.11 Parametric Monitoring (Thermal Oxidizer) [326 IAC 2-1.1-5] [326 IAC 8-7-9] [326 IAC 8-7-10]

The thermal oxidizer for VOC control shall be in operation when propylene oxide is being added to special starch Reactors 2, 3, 4, and 7. The thermal oxidizer shall maintain a minimum operating temperature of 1300 °F and a maximum flow rate of 1000 acfm.

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The flow of propylene oxide shall be automatically interrupted when that temperature falls below 1300 °F or the temperature established during the most recent compliant stack test.
- (b) 100% of the vapors, when using propylene oxide in starch Reactors 2, 3, 4, and 7, shall be captured and shall pass through the Thermal Oxidizer.
- (c) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the reading is outside the above-mentioned range for any one reading. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.6.12 Baghouse (Dust Collector) Inspections

An inspection shall be performed each calendar quarter of all bags that control particulate emissions. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.6.13 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, or dust traces, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.6.14 Record Keeping Requirements

- (b) To document compliance with Condition D.6.9, the Permittee shall maintain records of visible emission notations of the Starch Production Area facility stack exhausts.
- (b) To document compliance with Condition D.6.10, the Permittee shall maintain daily records of the total static pressure drop readings.
- (c) To document compliance with Condition D.6.11, the Permittee shall maintain records of the thermal oxidizer temperature once per day when operating.
- (d) To document compliance with Condition D.6.12, the Permittee shall maintain records of the results of the inspections.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.7 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:	<u>VII. Starch Warehouse Area</u>
(a) Channel 2 Receiver (Unit ID 93-32-W), installed September 2000.	Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-32-W.
(b) Channel 3 Receiver (Unit ID 93-33-W), installed September 2000.	Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-33-W.
(c) Channel 4 Receiver (Unit ID 93-34-W), installed September 2000.	Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-34-W.
(d) Channel 6 Receiver (Unit ID 93-35-W), installed September 2000.	Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-35-W.
(e) Channel 4/6 Packing (Unit ID 93-37-W), installed September 2000.	Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-37-W.
(f) Channel 2/3 Packing (Unit ID 93-36-W), installed September 2000.	Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-36-W.
(g) Central Vacuum System (Unit ID 93-38-W), installed October 2000.	Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-38-W.
(h) Dried Corn Syrup Conveying System (Unit ID 93-04-W), installed July 1976.	Particulate emissions are controlled by a baghouse (CE93-04-W) that exhausts to stack S93-04-W.
(i) Corn Syrup Solids Conveying System (Unit ID 93-05-W), installed July 1976.	Particulate emissions are controlled by a baghouse (CE93-05-W) that exhausts to stack S93-05-W.
(j) Frodex Semi-bulk Packing System (Unit ID 93-08-W), installed September 1989.	Particulate emissions are controlled by a baghouse (CE93-08-W) that exhausts to stack S93-08-W.
(k) Cornstarch Bag Dumping Stations #1 and #2 (Unit IDs 93-09-W and 93-10-W), installed April 1988.	Particulate emissions are controlled by bag filter dust collectors (CE93-09-W and CE93-10-W) that exhaust to stacks S93-09-W and S93-10-W.
(l) Starch Bulk Loading (Unit ID 93-14-W), installed April 1995.	Particulate emissions are controlled by a baghouse (CE93-14-W) that exhausts to stack S93-14-W.
(m) Starch Bulk Loading Vacuum Cleanup System (Unit ID 93-15-W), installed February 1994.	Cleanup for cornstarch spills. Particulate emissions are controlled by bag filter dust collector (CE93-15-W) that exhausts to stack S93-15-W.
(n) Starch Mixing and Bulk Bagging Systems #1 and #2 (Unit IDs 93-16-W and 93-17-W), installed August 1995.	Particulate emissions are controlled by baghouses (CE93-16-W and CE93-17-W) that exhaust to stacks S93-16-W and S93-17-W.
(o) P.G. Starch Receiver (Unit ID 93-18-W), installed September 1999.	Particulate emissions are controlled by dust collector (CE93-18-W) that exhausts to stack S93-18-W.
(p) P.G. Starch Packing (Unit ID 93-39-W), installed January 2000.	Particulate emissions are controlled by a dust collector (CE93-39-W) that exhausts to stack S93-39-W.
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)	

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

D.7.1 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6-1-2(h)]

Pursuant to Minor Source Modification 089-12593-00203, issued September 2000, and 326 IAC 6-1-2 (Non-attainment Area Particulate Limitations), subsection (h), emissions of particulate matter less than ten (10) microns in diameter (PM10) from the following units shall be limited to the following:

	Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
(a)	Channel 2 Receiver (93-32-W)	0.005	0.10
(b)	Channel 3 Receiver (93-33-W)	0.005	0.10
(c)	Channel 4 Receiver (93-34-W)	0.005	0.10
(d)	Channel 6 Receiver (Dextrin) (93-35-W)	0.005	0.10
(e)	Channel 4/6 Packing (Dextrin)(93-37-W)	0.005	0.51
(f)	Channel 2/3 Packing (93-36-W)	0.005	0.51
(g)	Central Vacuum System (93-38-W)	0.005	0.02
(o)	P.G. Starch Receiver (93-18-W)	0.01	0.343
(p)	P.G. Starch Packing (Unit ID 93-39-W)	0.01	0.13

D.7.2 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6-1-10.1(d)]

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (d), emissions of particulate matter less than ten microns in diameter (PM10) from the following units shall be limited to the following:

	Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
(h)	Dried Corn Syrup (Frodex) Conveying System (93-04-W)	0.01	0.069
(i)	Corn Syrup Solids Conveying System (93-05-W)	0.01	0.066
(j)	Frodex Semi-bulk Packing System (93-08-W)	0.01	0.083
(k)	Cornstarch Bag Dump Stations 1 & 2 (93-09-W and 93-10-W)	0.01 each	0.10 each
(l)	Starch Bulk Loading (93-14-W)	0.01	0.273
(m)	Starch Bulk Loading Vacuum Cleanup System (93-15-W)	0.01	0.021
(n)	Starch Mixing and Bulk Bagging System #1 (93-16-W)	0.01	0.130
(n)	Starch Mixing and Bulk Bagging System #2 (93-17-W)	0.01	0.264

D.7.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.7.4 Particulate Matter less than 10 microns in diameter (PM10)

In order to comply with D.7.1 and D.7.2, the control devices for PM10 control shall be in operation and control emissions from each facility at all times that the facility is in operation.

Compliance Monitoring Requirements

D.7.5 Visible Emissions Notations

- (a) Visible emission notations of each Starch Warehouse Area facility stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.7.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across the control device used in conjunction with each Starch Warehouse Area facility as listed below, at least once per day when the associated facility is in operation. When for any one reading, the pressure drop across the baghouse or dust collector is outside any of the following ranges or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM-OAQ and HDEM and shall be calibrated at least once every six (6) months or in accordance with the manufacturer's specifications provided those specifications are available on site with the Preventive Maintenance Plan.

	Unit ID	Control Equipment	Pressure Drop Range (inches of water)
(a)	Channel 2 Receiver (93-32-W)	Dust Collector	0.1 - 6
(b)	Channel 3 Receiver (93-33-W)	Dust Collector	0.1 - 6
(c)	Channel 4 Receiver (93-34-W)	Dust Collector	0.1 - 6
(d)	Channel 6 Receiver (Dextrin) (93-35-W)	Dust Collector	0.1 - 6
(e)	Channel 4/6 Packing (Dextrin) (93-37-W)	Dust Collector	0.1 - 6
(f)	Channel 2/3 Packing (93-36-W)	Dust Collector	0.1 - 6
(g)	Central Vacuum System (93-38-W)	Dust Collector	0.1 - 6
(h)	Dried Corn Syrup (Frodex) Conveying System (93-04-W)	Dust Collector	0.1 - 6
(i)	Corn Syrup Solids Conveying System (93-05-W)	Dust Collector	0.1 - 6
(j)	Frodex Semi-bulk Packing System (93-08-W)	Dust Collector	0.1 - 6
(k)	Cornstarch Bag Dump Stations 1 & 2 (93-09-W and 93-10-W)	Dust Collectors	0.1 - 6 each

(l)	Starch Bulk Loading (93-14-W)	Dust Collector	0.1 - 6
(m)	Starch Bulk Loading Vacuum Cleanup System (93-15-W)	Dust Collector	0.1 - 6
(n)	Starch Mix and Bulk Bag Systems 1 & 2 (93-16-W and 93-17-W)	Dust Collectors	0.1 - 6 each
(o)	P.G. Starch Receiver (93-18-W)	Dust Collector	0.1 - 6
(p)	P.G. Starch Packing (Unit ID 93-39-W)	Dust Collector	0.1 - 6

D.7.7 Baghouse (Dust Collector) Inspections

An inspection shall be performed each calendar quarter of all bags that control particulate emissions. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.7.8 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, or dust traces, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.7.9 Record Keeping Requirements

- (a) To document compliance with Condition D.7.5, the Permittee shall maintain records of the visible emission notations of the Starch Warehouse Area Facility stack exhausts.
- (b) To document compliance with Condition D.7.6, the Permittee shall maintain daily records of the total static pressure drop readings.
- (c) To document compliance with Condition D.7.7, the Permittee shall maintain records of the results of the inspections.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

**PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: **Cargill, Inc.**
Source Address: 1100 Indianapolis Boulevard
Hammond, Indiana 46320
Mailing Address: 1100 Indianapolis Boulevard
Hammond, Indiana 46320-1094
Part 70 Permit No.: T089-7994-00203

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)
- Report (specify)
- Notification (specify)
- Affidavit (specify)
- Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967**

and

**HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
5925 Calumet Avenue
Hammond, Indiana 46320**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: **Cargill, Inc.**
Source Address: 1100 Indianapolis Boulevard
Hammond, Indiana 46320
Mailing Address: 1100 Indianapolis Boulevard
Hammond, Indiana 46320-1094
Part 70 Permit No.: T089-7994-00203

This form consists of 2 pages

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<p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.

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

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

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

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed By:

Title / Position:

Date:

Phone:

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

**PART 70 OPERATING PERMIT
QUARTERLY NATURAL GAS FIRED BOILER CERTIFICATION**

Source Name: **Cargill, Inc.**
Source Address: 1100 Indianapolis Boulevard
Hammond, Indiana 46320
Mailing Address: 1100 Indianapolis Boulevard
Hammond, Indiana 46320-1094
Part 70 Permit No.: T089-7994-00203

<input type="checkbox"/> Natural Gas Only
<input type="checkbox"/> Alternate Fuel burned
From: _____ To: _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Phone:
Date:

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

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

Source Name: **Cargill, Inc.**
Source Address: 1100 Indianapolis Boulevard
Hammond, Indiana 46320
Mailing Address: 1100 Indianapolis Boulevard
Hammond, Indiana 46320-1094
Part 70 Permit No.: T089-7994-00203

Months: _____ **to** _____ **Year:** _____

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<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p>	
<p><input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.</p>	
<p><input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD</p>	
<p>Permit Requirement (specify permit condition #)</p>	
<p>Date of Deviation:</p>	<p>Duration of Deviation:</p>
<p>Number of Deviations:</p>	
<p>Probable Cause of Deviation:</p>	
<p>Response Steps Taken:</p>	
<p>Permit Requirement (specify permit condition #)</p>	
<p>Date of Deviation:</p>	<p>Duration of Deviation:</p>
<p>Number of Deviations:</p>	
<p>Probable Cause of Deviation:</p>	
<p>Response Steps Taken:</p>	

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By:

Title / Position :

Date:

Phone:

Attach a signed certification to complete this report.

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

and

Hammond Department of Environmental Management

**Addendum to the
Technical Support Documents for a Part 70 Operating Permit**

Source Name:	Cargill, Inc.
Source Location:	1100 Indianapolis Boulevard, Hammond, IN 46320
County:	Lake
SIC Code:	2046 – Wet Corn Milling
Operation Permit No.:	T089-7994-00203
Permit Reviewer:	Ronald Holder

On January 15, 2004, the Hammond Department of Environmental Management (HDEM) had a notice published in the Hammond Times, Hammond, Indiana, stating that Cargill, Inc. had applied for a Part 70 Operating Permit to operate a Wet Corn Milling Facility. The notice also stated that the HDEM proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Cargill, Inc. submitted the following comments on February 12, 2004. If a response to a comment has resulted in a revision to the permit, the **bolded** language has been added and the language with a ~~line through it~~ has been deleted). The Table Of Contents has been modified to reflect these changes.

Comment 1:

In Paragraphs D.2.1, D.2.2, D.3.3, D.3.4, D.5.3, D.5.4, D.6.3, and D.6.4, IDEM, OAQ indicates that it “has information that indicates some units in this section are subject to” regulation, does not extend the permit shield to these units, and indicates it will re-open the permit to include the detailed requirements required to comply with the regulation and a compliance schedule. Cargill requests that each of these paragraphs be omitted from the permit and that all applicable requirements be specified in the permit document. Indiana regulations require that a Part 70 permit contain all emission limitations and standards that assure compliance with all applicable requirements and a compliance schedule for all sources that are not in compliance with all applicable requirements. 326 IAC 2-7-5, 2-7-6, and 2-7-4. These paragraphs fail to identify the applicable requirements and the units to which they apply, or set forth a compliance plan for those sources determined to be out of compliance. In fact, IDEM has not asserted to Cargill that any of these sources are out of compliance with a regulation and indicates in the Technical Support Document related to the draft permit that there are no enforcement actions pending against the facility.

These paragraphs also make it difficult for the source to fulfill the compliance certification requirements of the Part 70 permit as the compliance requirements are not specified in the permit. Further, Indiana regulations provide no mechanism for selectively applying the permit shield to applicable requirements at permit issuance. See 326 IAC 2-7-15. Finally, such paragraphs are unnecessary and redundant

because the general provisions of the draft permit and Indiana regulations already provide that if it is determined that a source is not in compliance with an applicable requirement after permit issuance, IDEM "shall immediately" reopen and revise the permit and issue a compliance order. Draft Permit B.12(b), 326 IAC 2-7-15.

Response to Comment 1:

IDEM has worked with the U. S. EPA, Region V, to develop language that addresses the current USEPA investigation into possible violations. That language is located in the conditions listed in the Permittee's comment. In order to remove this language, the Permittee would need to submit a BACT analysis certified by the "responsible official" or demonstrate to U.S. EPA that BACT is not applicable. Therefore, no changes have been made as a result of this comment. However, this language will be revised appropriately when this investigation comes to its conclusion.

The location of the Permit Shield condition referenced has been corrected from ~~B.13~~ to **B.12**.

Comment 2:

Cargill requests that Paragraph D.2.17 be omitted from the draft permit. This paragraph notes that Cargill submitted a revised RACT plan approximately six months ago, the submittal is currently under review, and IDEM will reopen the permit to include the detailed requirements to comply with the rule and a schedule for achieving compliance with such requirements. For the reasons noted above in Comment 1, the provision does not comport with Indiana's Part 70 regulations. The applicable RACT requirements must be specified in the permit. Should IDEM later determine that the source is not in compliance with the applicable requirements, the permit as drafted provides mechanisms to re-open the permit to insert requirements and a compliance plan to achieve compliance with the requirements.

Response to Comment 2:

IDEM and HDEM agree that a RACT plan was submitted to IDEM on February 27, 1995 and revised on August 22, 1995. However, at this time the RACT plan submitted by the Permittee has not been approved by IDEM or by the USEPA. Therefore, IDEM will need to re-open the Part 70 Operating permit, pursuant to 326 IAC 2-7-9, once the RACT plan has been approved in order to comply with the Part 70 Operating requirements established under 326 IAC 2-7-4. Therefore, no changes have been made as a result of this comment.

Comment 3:

Paragraph C.13 states the CCP was submitted to IDEM and HDEM in December 1993 and revised in September 1996. An additional revision to this Plan was submitted to both IDEM and HDEM in July 2003. Please reference this revision.

Response to Comment 3:

Condition C.13 has been revised as follows to incorporate the latest revision of the CCP:

C.13 Continuous Compliance Plan [326 IAC 6-1-10.1(l)] **[326 IAC 6-1-10.1(u)]**

Pursuant to 326 IAC 6-1-10.1(l) (Lake County PM10 Emission Requirements), the Permittee shall submit to IDEM and HDEM, and maintain at the source a copy of the Continuous Compliance Plan. The Permittee shall perform the inspections, monitoring, and record keeping requirements

as specified in 326 IAC 6-1-10.1 (p) through (r). ~~or according to the Permittee's CCP submitted December 1993 and revised in September 1996.~~ **The Permittee shall update the CCP, as needed, retain a copy on site, and make the updated CCP available for inspection as specified in 326 IAC 6-1-10.1(u).**

Comment 4:

In paragraph D.2.16(f), recording of the thermal oxidizer temperature is required once per shift. Cargill is requesting that this requirement be changed to once per day to be more consistent with the remainder of the permit monitoring requirements. In addition, a control permissive is in place that will shut down the associated emission unit when the thermal oxidizer temperature goes below 1300°F.

Response to Comment 4:

IDEM and HDEM have made an error in the draft. IDEM and HDEM believe that in order to establish continuous compliance, records should be kept on a 3-hour average and not a per shift or per day basis. This requirement is different from the other daily monitoring in such that it is requirement on conjunction with a continuous emissions monitoring system. The temperature recording frequency of once per shift is being revised to a 3-hour average to ensure continuous compliance with the VOC requirements.

D.2.10 Parametric Monitoring (Thermal Oxidizer) [326 IAC 8-1-6]

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded ~~once per shift, as a 3-hour average. and that temperature shall be greater than or equal to 1300 °F with a maximum flow rate of 500 acfm.~~ **The Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature of 1300 °F.**

D.2.16 Record Keeping Requirements

- (f) To document compliance with Condition D.2.10, the Permittee shall record the thermal oxidizer temperature ~~once per shift.~~ **as a 3-hour average.**

Comment 5:

After installation of the new scrubber unit for the Gluten Dryer (Source 121-01-G), the new pressure drop range for this unit will be 9 to 15. Cargill anticipates the installation of this unit to be sometime this summer. Please make the appropriate changes to Section D.3.13(a) of the draft permit.

Response to Comment 5:

HDEM has made record of the airflow increase due to the forthcoming installation of the new scrubber and has anticipated an increase in the pressure drop range for this unit. The new range is higher but does not represent a relaxation of monitoring requirements because the range width of six (6) inches of water remains the same. Therefore, the following change was made to monitoring condition D.3.13(a)

(a)	Gluten Ring Dryer System (121-01-G)	Wet Scrubber	3-9 9 - 15
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Upon further review, the IDEM and HDEM have determined that the following additions/changes to the permit were necessary.

On page 28 of 79, In accordance with the credible evidence rule (62 Fed. Reg. 8314, Feb 24, 1997); Section 113(a) of the Clean Air Act, 42 U.S. C. § 7413 (a); and a letter from the United States Environmental Protection Agency (USEPA) to IDEM, OAQ dated May 18, 2004, all permits must address the use of credible evidence; otherwise, USEPA will object to the permits. The following language will be incorporated into the permit to address credible evidence:

B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314]

Notwithstanding the conditions of this permit that state specific methods that may be used to demonstrate compliance with, or a violation of, applicable requirements, any person (including the Permittee) may also use other credible evidence to demonstrate compliance with, or a violation of, any term or condition of this permit.

On page 49 of 79, in Section D.3, Grind and Feedhouse, the following language was added because of information that indicates the existence of SO₂ emissions above major source levels (326 IAC 2-3) from some of the Grind and Feedhouse dryers.

D.3.5 SO₂ Emissions [326 IAC 2-3] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 2-3 (Emission Offset). Therefore, the Permit Shield provided by Condition B.12 of this permit does not apply to those emission units with regards to 326 IAC 2-3. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-3 and a schedule for achieving compliance with such requirements.

The remaining conditions in Section D.3 and the condition references in the record keeping and reporting requirements in Section D.3 were re-numbered accordingly. The Table of Contents was also modified to reflect this addition.

On page 58 of 79, in Section D.5, Refinery, the following language was added because of information that indicates the existence of CO emissions above major source levels (326 IAC 2-2) from the Carbon Furnace.

D.5.5 CO Emissions [326 IAC 2-2] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration). Therefore, the Permit Shield provided by Condition B.12 of this permit does not apply to those emission units with regards to 326 IAC 2-2 (PSD). The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-2 (PSD) and a schedule for achieving compliance with such requirements.

The remaining conditions in Section D.5 and the condition references in the record keeping and reporting requirements in Section D.5 were re-numbered accordingly. The Table of Contents was also modified to reflect this addition.

On page 36 of 79, the following revision was made to the Emission Statement condition to incorporate the revisions to 326 IAC 2-6 that became effective March 27, 2004. The revised rule was published in the April 1, 2004 Indiana Register.

C.21 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)]
[326 IAC 2-6]

- ~~(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:~~
- (a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:**
- (1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting); all pollutants listed in 326 IAC 2-6-4(a);**
 - (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purposes of Part 70 fee assessment.**
- ~~(b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:~~

This statement must be submitted to:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

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

- ~~(e)~~**(b)** The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and HDEM on or before the date it is due.

On April 15, 2004, the United States Environmental Protection Agency (U.S. EPA) named 23 Indiana counties and one partial county nonattainment for the new 8-hour ozone standard. The designations became effective on June 15, 2004. Lake County has been designated as nonattainment for the 8-hour ozone standard. The following has been added to A.1 General Information:

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates Wet Corn Milling Facility.

Responsible Official: Plant Manager
Source Address: 1100 Indianapolis Boulevard
Hammond, Indiana 46320
Mailing Address: 1100 Indianapolis Boulevard
Hammond, Indiana 46320-1094
General Source Phone Number: (219) 659-2000
SIC Code: 2046 – Wet Corn Milling
County Location: Lake
Source Location Status: **Nonattainment for ozone under the 8-hour standard**
Nonattainment for ozone under the 1-hour standard
Nonattainment for SO₂, and Ozone
Attainment for PM₁₀, NO_x, CO, and Lead
Source Status: Part 70 Permit Program
Major Source, under PSD or Emission Offset Rules;
and Nonattainment NSR
Major Source, Section 112 of the Clean Air Act
Not 1 of 28 Source Categories

Although the TSD itself will not be revised as it is a historical document and the TSD was correct at the time of public notice, the following is being provided to show how the county attainment status has been affected as a result of the 8-hour ozone standard designations. The county attainment status regarding other pollutants remain unchanged; therefore will not be shown below other than in the table.

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM-10	attainment
SO ₂	nonattainment
NO ₂	attainment
1-hour Ozone	Severe nonattainment
8-hour Ozone	Moderate nonattainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) ~~are precursors for the formation of ozone and~~ **Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone.**

- (1) **On January 26, 1996 in 40 CFR 52.777(i), the U.S. EPA granted a waiver of the requirements of Section 182(f) of the CAA for Lake and Porter Counties, including the lower NOx threshold for nonattainment new source review.** Therefore, VOC emissions **alone** are considered when evaluating the rule applicability relating to **the 1-hour** ozone standards. Lake County has been designated as nonattainment **in Indiana** for **the 1-hour** ozone **standard**. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. **See the State Rule Applicability for the source section.**
- (2) **VOC and NOx emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. *Lake (or Porter)* County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for nonattainment new source review.**

Indiana Department of Environmental Management
Office of Air Quality
and
Hammond Department of Environmental Management

Technical Support Document (TSD) for a Part 70 Operating Permit

Source Background and Description

Source Name: Cargill, Inc.
Source Location: 1100 Indianapolis Boulevard, Hammond, Indiana 46320
County: Lake County
SIC Code: 2046 – Wet Corn Milling Facility
Operation Permit No.: T089-7994-00203
Permit Reviewer: Ronald Holder, HDEM

The Office of Air Quality (OAQ) and the Hammond Department of Environmental Management have reviewed a Part 70 permit application from Cargill, Inc. relating to the operation of a Wet Corn Milling Facility that produces starches, corn syrup, and animal feed.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

I. Biogas Flare

Biogas Flare (Unit ID 800-05-E), installed July 1995. Biogas is generated in the wastewater treatment plant by anaerobic reaction. The biogas flare converts the hydrogen sulfide (H₂S) in the biogas to sulfur dioxide (SO₂). It is used when the biogas stream is not being diverted to a plant process burner for energy recovery, which is the normal scenario. The biogas flare exhausts to stack ID S800-05-E.

II. Beta Cyclodextrin (BCD) Area and Hydroxypropyl Cyclodextrin (HPCD) Process

The BCD process uses a VOC catalyst and includes the following process units.

- (a) BCD Reaction and Separation (Unit ID 127-03-B), installed May 1993. VOC emissions from two (2) BCD reactors, a product stripper, and a by-product stripper are controlled by primary condensers a, b, and c that vent to and exhaust from the secondary and final polishing condenser 127-03-B(d).
- (b) BCD Dryer (Unit ID 127-01-B), installed December 1988. BCD crystals are passed through a rotary tray dryer. BCD loadout is controlled by a bag filter dust collector. This unit exhausts to stack ID S127-01-B.

- (c) BCD Mill Feed Hopper (Unit ID 127-25-B), installed May 1993. Particulate emissions are controlled by dust collector (CE127-25-B) that exhausts to stack S127-25-B.
- (d) No. 1 and No. 2 BCD Storage Hoppers (Unit ID 127-23-B and 127-24-B), installed May 1993. BCD is pneumatically conveyed to these hoppers equipped with bag filter dust collectors that exhaust to stacks S127-23-B and S127-24-B.
- (e) No. 1 and No. 2 Vacuum Cleaner Systems (Unit ID 127-21-B and 127-22-B), installed May 1993. These systems are for building dust. Particulate emissions are controlled by dust collectors that exhaust to stacks S127-21-B and S127-22-B.

Hydroxypropyl Cyclodextrin (HPCD) is made using the above beta-cyclodextrin (BCD). This process includes the following unit:

- (f) One (1) 5000 gallon Hydroxypropyl Cyclodextrin (HPCD) Reactor (Unit ID 127-27-B), installed in 1998. A 500 SCFM Catalytic/Thermal Oxidizer is used to oxidize 98% of the VOC emissions.

III. Grind and Feedhouse Area

- (a) Gluten Dryer System (Unit ID 121-01-G), installed in March 1995. Gluten meal is fed to a natural and bio gas-fired ring dryer. Particulate emissions are controlled by wet scrubber (CE121-01-G) that exhausts to stack S121-01-G.
- (b) First Stage Germ Dryer Receiver (Unit ID 21A-01-G), installed in May 1978. Corn germ is pneumatically transferred to a germ dryer. Particulate emissions are controlled by a cyclone (CE21A-01-G) that exhausts to stack S21A-01-G.
- (c) First Stage Germ Dryer (Unit ID 21A-02-G), installed in May 1978. Corn germ is fed to this dryer heated with steam from plant boilers. Particulate emissions are controlled by a cyclone and wet roto-clone in series (CE21A-02-G) that exhaust to stack S21A-02-G.
- (d) Second Stage Germ Dryer Receiver (Unit ID 51A-01-G), installed in May 1978. Corn germ from the first stage dryer is pneumatically conveyed to the second stage dryer. Particulate emissions are controlled by a cyclone (CE51A-01-G) that exhausts to stack S51A-01-G.
- (e) Second Stage Germ Dryer (Unit ID 51A-02-G), installed in October 1995. Corn germ is fed to this dryer heated by steam from the plant boilers. Particulate emissions are controlled by a cyclone and wet scrubber in series (CE51A-02-G) that exhausts to stack S51A-02-G.
- (f) Fiber Drying Equipment (Unit ID 89-01-G), installed in October 1995. Wet fiber is fed to this natural and bio gas-fired dryer. Particulate matter is controlled by a scrubber (CE89-01-G) that exhausts to stack S89-01-G.
- (g) Rotary Feed Dryer (Unit ID 89-03-G), installed in October 1995. Wet feed is fed to this natural and bio gas-fired dryer. Particulate emissions are controlled by four (4) recirculating cyclones. VOC emissions are controlled by a thermal oxidizer (CE89-03-TO) that normally exhausts to the Fiber Dryer Furnace but can exhaust to its own stack S89-03-G.
- (h) Corn Screenings to Grind 1 Feed Transfer (Unit ID 89-05-G), installed in July 2000. Particulate emissions are controlled by a dust collector (CE89-05-G) that exhausts to stack S89-05-G.

- (i) Waxy Feed Drum Dryer (Unit ID 124-01-G), installed in March 1980. Waxy corn fiber is fed to a rotary drum dryer. Particulate emissions are controlled by a wet scrubber (CE124-01-G) that exhausts to stack S124-01-G.
- (j) Germ Storage Silo (Unit ID 121-14-G), installed in May 1996. Corn germ is pneumatically conveyed to this storage silo. Particulate emissions are controlled by a dust collector (CE121-14-G) that exhausts to stack S121-14-G.
- (k) Germ Dryer/Cooler (Unit ID 124A-01-G), installed in November 1994. Corn germ is fed to this natural and bio gas-fired germ dryer and cooler. Particulate emissions are controlled by four (4) cyclones (CE124A-01-G) that exhaust to stack S124A-01-G.
- (l) Waxy Feed Mill Equipment (Unit ID 124-22-G), installed in July 1976. Waxy corn fiber is milled and fed to a hopper equipped with a Flex-Kleen Bag Filter Collector (CE124-22-G). This system exhausts to stack S124-22-G.
- (m) Corn Screenings to Grind 2 Feed Transfer (Unit ID 124-23-G), installed in July 2000. Particulate emissions are controlled by a dust collector (CE124-23-G) that exhausts to stack S124-23-G.
- (n) Loose Feed Bin (Unit ID 201-05-G), installed in October 2000. Particulate emissions are controlled by a bin vent (CE201-05-G) that exhausts to stack S201-05-G.
- (o) Hammermill #1 (Unit ID 201-01-G), installed in October 2000. Particulate emissions are controlled by a dust collector (CE201-01-G) that exhausts to stack S201-01-G.
- (p) Hammermill #2 (Unit ID 201-02-G), installed in October 2000. Particulate emissions are controlled by a dust collector (CE201-02-G) that exhausts to stack S201-02-G.
- (q) Pellet Cooler #1 (Unit ID 201-03-G), installed in October 2000. Particulate emissions are controlled by a cyclone (CE201-03-G) that exhausts to stack S201-03-G.
- (r) Pellet Cooler #2 (Unit ID 201-04-G), installed in October 2000. Particulate emissions are controlled by a cyclone (CE201-04-G) that exhausts to stack S201-04-G.
- (s) Central Vacuum Pelletizing (Unit ID 201-06-G), installed in October 2000. Particulate emissions are controlled by a dust collector (CE201-06-G) that exhausts to stack S201-06-G.
- (t) Central Vacuum Loadout (Unit ID 200-07-G), installed in October 2000. Particulate emissions are controlled by a dust collector (CE200-07-G) that exhausts to stack S200-07-G.
- (u) Pellet Silo #1 (Unit ID 200-01-G), installed in October 2000. Particulate emissions are controlled by a dust collector (CE200-01-G) that exhausts to stack S200-01-G.
- (v) Pellet Silo #2 (Unit ID 200-02-G), installed in October 2000. Particulate emissions are controlled by a dust collector (CE200-02-G) that exhausts to stack S200-02-G.
- (w) Loose Feed Silo (Unit ID 200-06-G), installed in October 2000. Particulate emissions are controlled by a dust collector (CE200-06-G) that exhausts to stack S200-06-G.
- (x) Gluten Silo (Unit ID 200-04-G), installed in October 2000. Particulate emissions are controlled by a dust collector (CE200-04-G) that exhausts to stack S200-04-G.

- (y) Germ Silo (Unit ID 200-03-G), installed in October 2000. Particulate emissions are controlled by a dust collector (CE200-03-G) that exhausts to stack S200-03-G.
- (z) Bulk Loadout (Unit ID 200-05-G), installed in October 2000. Particulate emissions are controlled by a dust collector (CE200-05-G) that exhausts to stack S200-05-G.
- (aa) Corn Dump Pit (Unit ID 140-05-G), installed in December 1995. Particulate emissions are controlled by a filter baghouse (CE140-05-G) that exhausts to stack S140-05-G.
- (bb) Corn Elevator Conveying (Unit ID 140-07-G), installed in December 1995. Material is transferred from corn belt 1 to corn belt 2. Particulate emissions are controlled by a filter baghouse (CE140-07-G) that exhausts to stack S140-07-G.
- (cc) Corn Receiving and Storage, installed in December 1995. This system includes six Storage Bins, each with its own bin vent for control of particulate emissions:
 - a) Bin #1: Unit ID 140-01-G
 - a) Bin #2: Unit ID 140-02-G
 - b) Bin #3: Unit ID 140-03-G
 - c) Bin #4: Unit ID 140-04-G
 - d) Bin #5: Unit ID 33-01-G
 - e) Bin #6: Unit ID 33-02-G
- (dd) Gravity Take-up Conveyor (Corn Scale System)(Unit ID 140-06-G), installed in December 1995. Corn is transferred from corn belt 2 to corn belt 3. Particulate emissions are controlled by baghouse (CE140-06-G) that exhausts to stack S140-06-G.
- (ee) Corn Cleaner (Unit ID 33-03-G), installed in December 1995. Corn passes through mechanical cleaners. Particulate emissions are controlled by a filter baghouse (CE33-03-G) that exhausts to stack S33-03-G.
- (ff) Corn Screenings System (Unit ID 30-16-G), installed in July 1976. This system includes a dirt storage silo equipped with a bag filter collector (CE30-16-G) that exhausts to stack S30-16-G.

IV. Utility Area

The Utility area includes six (6) boilers used to supply steam for plant processes. A small rental, natural gas fired boiler is used when all boilers are down for maintenance.

- (a) Boiler No. 1 (Unit ID 10-01-U), Combustion Engineering Model VP10R, installed in 1960, with a maximum rate of 96 MMBtu/hr heat input and natural gas-fired only. This unit exhausts through stack S10-01-U.
- (b) Boiler No. 2 (Unit ID 10-02-U), Erie City Model 19M, installed in 1966, with a maximum rate of 160 MMBtu/hr heat input and natural gas-fired only. This unit exhausts through stack S10-02-U.
- (c) Boiler No. 6 (Unit ID 10-03-U), Combustion Engineering Model VU-50, installed in 1956, with a maximum rate of 200 MMBtu/hr heat input and natural gas-fired with a fuel oil #6 secondary capability. This unit exhausts through stack S10-03-U.

- (d) Boiler No. 7 (Unit ID 10-04-U), Combustion Engineering Model VU, installed in 1944, with a maximum rate of 120 MMBtu/hr heat input and natural gas-fired with a fuel oil #6 secondary capability. This unit also exhausts through stack S10-03-U.
- (e) Boiler No. 8 (Unit ID 10-05-U), Combustion Engineering Model VU, installed in 1937, with a maximum rate of 120 MMBtu/hr heat input and natural gas-fired with a fuel oil #6 secondary capability. This unit exhausts through stack S10-05-U.
- (f) Boiler No. 10 (Unit ID 10-06-U), Combustion Engineering Model VU, installed in 1937, with a maximum rate of 120 MMBtu/hr heat input and natural gas-fired with a fuel oil #6 secondary capability. This unit also exhausts through stack S10-05-U.

V. Refinery Area

- (a) Corn Syrup Solids Manufacturing System #2 (Unit ID 18-03-R), installed July 1992. Corn syrup solids are fed through a cooling tunnel, milled, screened, and dropped to a receiver for packing. Particulate emissions are controlled by a jet pulse dust collector (CE18-03-R) that exhausts to stack S18-03-R.
- (b) Corn Syrup Spray Dryer #4 (Unit ID 100-03-R), installed April 1992. Corn syrup is fed to a dryer. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by wet scrubber (CE100-03-R) that exhausts to stack S100-03-R.
- (c) Corn Syrup Spray Dryer/Cooler System #3 (Unit ID 100-01-R), installed July 1987. Corn syrup is fed to a dryer. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet venturi scrubber (CE100-01-R) that exhausts through stack S100-01-R.
- (d) Activated Carbon Regeneration Furnace #2 (Unit ID 104-01-R), installed July 1995. Spent carbon is regenerated in this natural gas-fired furnace. Emissions are controlled by a venturi scrubber and an impingement furnace scrubber (CE104-01-R) that exhaust through stack S104-01-R.
- (e) Soda Ash Tank (Unit ID 104-02-R), installed July 1995. Particulate emissions from loading this tank are controlled by a venturi scrubber (CE104-02-R) that exhausts to stack S104-02-R.
- (f) Filter Aid Hopper (Unit ID 104-03-R), installed July 1995. This hopper is equipped with a jet pulse baghouse (CE104-03-R) that exhausts to stack S104-03-R.
- (g) Sodium Bisulfite Bag Dump (Unit ID 104-05-R), installed July 1995. This unit is controlled by a jet pulse baghouse (CE104-05-R) that exhausts to stack S104-05-R.
- (h) Diatomaceous Earth Unloading (Unit ID 104-08-R), installed November 1998. Diatomaceous earth (filter aid) is unloaded from railcar to Silo. Emissions are controlled by a Bin Vent Filter (DC2312) that exhausts to stack S104-08-R.
- (i) Citric Acid Dump Station (Unit ID 104-09-R), installed November 1998. Citric Acid is added during the production of corn syrup. Particulate emissions are controlled by a built-in dust collector (CE104-09-R) that exhausts to stack S104-09-R.

VI. Starch Production Area

- (a) Batch Scale Hopper #1 (Unit ID 34-01-S), installed January 1991. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-01-S) that exhausts to stack S34-01-S.
- (b) Dextrin Starch Reactor #1 (Unit ID 34-02-S), installed January 1991. Dried corn starch is fed to a reactor heated by steam from the plant boilers. Particulate emissions are controlled by a bag filter dust collector (CE34-02-S) that exhausts to stack S34-02-S.
- (c) Dextrin Starch Cooler #1 (Unit ID 34-03-S), installed January 1991. Roasted corn starch is fed to a cooler and transferred to a hopper for storage. Particulate emissions are controlled by a bag filter dust collector (CE34-03-S) that exhausts to stack S34-03-S.
- (d) Surge Hopper #1 (Unit ID 34-05-S), installed January 1991. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-05-S) that exhausts to stack S34-05-S.
- (e) Dextrin Feed Hoppers #1 and #2 (System #1) (Unit IDs 34-06-S and 34-07-S), installed April 1993. Starch is gravity conveyed to these hoppers. Particulate emissions are controlled by bag filter dust collectors (CE34-06-S and CE34-07-S) that exhaust to stacks S34-06-S and S34-07-S.
- (f) Batch Scale Hopper #2 (Unit ID 34B-13-S), installed October 1993. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34B-13-S) that exhausts to stack S34B-13-S.
- (g) Dextrin Starch Reactor #2 (Unit ID 34B-04-S), installed October 1993. Dried corn starch is fed to a reactor heated by steam from the plant boilers.. Particulate emissions are controlled by a bag filter dust collector (CE34B-04-S) that exhausts to stack S34B-04-S.
- (h) Dextrin Starch Cooler #2 (Unit ID 34B-01-S), installed October 1993. Roasted corn starch is fed to a cooler and transferred to a hopper for storage. Particulate emissions are controlled by a bag filter dust collector (CE34B-01-S) that exhausts to stack S34B-01-S.
- (i) Surge Hopper #2 (Unit ID 34B-03-S), installed October 1993. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34B-03-S) that exhausts to stack S34B-03-S.
- (j) Dextrin Feed Hoppers #3 and #4 (System #2) (Unit IDs 34B-05-S and 34B-06-S), installed October 1993. Starch is gravity conveyed to these hoppers. Particulate emissions are controlled by bag filter dust collectors (CE34B-05-S and CE34B-06-S) that exhaust to stacks S34B-05-S and S34B-06-S.
- (k) Dextrin Bulk Loading Equipment (Unit ID 48-09-S), installed before 1977. Starch is pneumatically conveyed to this hopper. Particulate emissions are controlled by a bag filter dust collector (CE48-09-S) that exhausts to stack S48-09-S.
- (l) Starch Ring Dryer #2 (Unit ID 59-03-S), installed November 1993. Starch is fed to this natural gas-fired ring dryer. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE59-03-S) that exhausts to stack S59-03-S.

- (m) Starch Milling Systems #1 and #2 (Unit IDs 59-01-S and 59-02-S), installed July 1976. Dried corn starch is milled and transferred to storage. Particulate emissions are controlled by bag filter dust collectors (CE59-01-S and CE59-02-S) that exhaust to stacks S59-01-S and S59-02-S.
- (n) Starch Ring Dryer #3 (Unit ID 125-01-S), installed May 1980. Corn starch is fed to this natural gas-fired ring dryer. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE125-01-S) that exhausts to stack S125-01-S.
- (o) Special Starch Process with Starch Ring Dryer #4 (Unit ID 128-01-S), installed December 1993. Corn starch is fed to this natural gas-fired dryer. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE128-01-S) that exhausts to stack S128-01-S.
- (p) Reactors #1 through #8 (Unit IDs 128-06-S through 128-13-S), installed November 1988 (1-4) and December 1991 (5-8). Cornstarch and propylene oxide are reacted through Reactors 2, 3, 4, and 7 only. When propylene oxide is used in the starch reaction, VOC emissions are controlled by a thermal oxidizer that exhausts to stack S128-14-S.
- (q) Sodium Sulfate Storage Bin (Unit ID 128-25-S), installed October 2000. Particulate emissions are controlled by a bin vent dust collector (FA1900) that exhausts to stack S128-25-S.
- (r) Sodium Sulfate Weigh Bin (Unit ID 128-26-S), installed October 2000. Particulate emissions are controlled by a bin vent dust collector (FA1950). that exhausts to stack S128-26-S.
- (s) Corn Starch Storage Bins #20 through #36 (Unit IDs 120-01-S through 120-17-S), installed July 1990. Corn starch is pneumatically conveyed to these storage bins. Particulate emissions are controlled by bag filter dust collectors that exhaust to stacks S120-01-S through S120-17-S.
- (t) Waxy Cornstarch Bulk Storage Bins #95 through #98 (Unit IDs 126-01-S through 126-04-S), replaced in January 1996. Waxy corn starch is conveyed to these bins. Particulate emissions are controlled by dust collectors (CE126-01-S through CE126-04-S) that exhaust to stacks S126-01-S through S126-04-S.
- (u) Cornstarch Blending Systems #1 through #4 (Unit IDs 130-01-S through 130-04-S), installed April 1988. Corn starch is blended and moved to the warehouse for packing. Particulate emissions are controlled by bag filter dust collectors (CE130-01-S through CE130-04-S) that exhaust to stacks S130-01-S through S130-04-S.
- (v) Dextrin Blender (Unit ID 130-05-S), installed October 1993. Corn starch is blended and moved to the warehouse for packing. Particulate emissions are controlled by a dust collector (CE130-05-S) that exhausts to stack S130-05-S.
- (w) One (1) 28,000 gallon horizontal propylene oxide tank (Unit ID 93-18-S), installed in 1988, with 95% efficient vapor recovery (liquid nitrogen condenser). This tank also provides propylene oxide for other starch processes.

VII. Starch Warehouse Area

- (a) Channel 2 Receiver (Unit ID 93-32-W), installed September 2000. Particulate emissions are controlled by a bag filter dust collector that exhausts to stack S93-32-W.
- (b) Channel 3 Receiver (Unit ID 93-33-W), installed September 2000. Particulate emissions are controlled by a bag filter dust collector that exhausts to stack S93-33-W.
- (c) Channel 4 Receiver (Unit ID 93-34-W), installed September 2000. Particulate emissions are controlled by a bag filter dust collector that exhausts to stack S93-34-W.
- (d) Channel 6 Receiver (Unit ID 93-35-W), installed September 2000. Particulate emissions are controlled by a bag filter dust collector that exhausts to stack S93-35-W.
- (e) Channel 4/6 Packing (Unit ID 93-37-W), installed September 2000. Particulate emissions are controlled by a bag filter dust collector that exhausts to stack S93-37-W.
- (f) Channel 2/3 Packing (Unit ID 93-36-W), installed September 2000. Particulate emissions are controlled by a bag filter dust collector that exhausts to stack S93-36-W.
- (g) Central Vacuum System (Unit ID 93-38-W), installed October 2000. Particulate emissions are controlled by a bag filter dust collector that exhausts to stack S93-38-W.
- (h) Dried Corn Syrup Conveying System (Unit ID 93-04-W), installed July 1976. Particulate emissions are controlled by a baghouse (CE93-04-W) that exhausts to stack S93-04-W.
- (i) Corn Syrup Solids Conveying System (Unit ID 93-05-W), installed July 1976. Particulate emissions are controlled by a baghouse (CE93-05-W) that exhausts to stack S93-05-W.
- (j) Frodex Semi-bulk Packing System (Unit ID 93-08-W), installed September 1989. Particulate emissions are controlled by a baghouse (CE93-08-W) that exhausts to stack S93-08-W.
- (k) Corn Starch Bag Dumping Stations #1 and #2 (Unit IDs 93-09-W and 93-10-W), installed April 1988. Particulate emissions are controlled by bag filter dust collectors (CE93-09-W and CE93-10-W) that exhaust to stacks S93-09-W and S93-10-W.
- (l) Starch Bulk Loading (Unit ID 93-14-W), installed April 1995. Particulate emissions are controlled by a baghouse (CE93-14-W) that exhausts to stack S93-14-W.
- (m) Starch Bulk Loading Vacuum Cleanup System (Unit ID 93-15-W), installed February 1994. Cleanup for corn starch spills. Particulate emissions are controlled by a bag filter dust collector (CE93-15-W) that exhaust to stack S93-15-W.
- (n) Starch Mixing and Bulk Bagging Systems #1 and #2 (Unit IDs 93-16-W and 93-17-W), installed August 1995. Particulate emissions are controlled by baghouses (CE93-16-W and CE93-17-W) that exhaust to stacks S93-16-W and S93-17-W.
- (o) P.G. Starch Receiver (Unit ID 93-18-W), installed September 1999. Starch is received from P.G. starch roll dryers for packaging. Particulate emissions are controlled by a dust collector (CE93-18-W) that exhausts to stack S93-18-W.

- (p) P.G. Starch Packing (Unit ID 93-39-W), installed January 2000. Particulate emissions are controlled by a dust collector (CE93-39-W) that exhausts to stack S93-39-W.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Insignificant Activities

This source also consists of insignificant activities with potential uncontrolled emissions below the exemption levels specified in 326 IAC 2-1.1-3(d)(1), including the following as defined in 326 IAC 2-7-1(21):

1. Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour [326 IAC 6-1-2].
2. Fuel oil-fired combustion sources with heat input equal to or less than 2 million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight [326 IAC 6-1-2].
3. Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour.
4. Combustion source flame safety purging on startup.
5. A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
6. A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
7. VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
8. VOC and HAP vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
9. Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.
10. Machining where an aqueous cutting coolant continuously floods the machining interface.
11. Cleaners and solvents characterized as follows:
 - A) having a vapor pressure equal to or less than 2 kPa; 15mm Hg; or 0.3 psi measured at 38°C (100°F) or;
 - B) having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
12. The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-1-2]

13. Closed loop heating and cooling systems.
14. Structural steel and bridge fabricating activities using 80 tons or less of welding consumables.
15. Solvent recycling systems with batch capacity less than or equal to 100 gallons.
16. Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.
17. Operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.
18. Noncontact cooling tower systems with forced and induced draft cooling tower system not regulated under a NESHAP.
19. Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
20. Heat exchanger cleaning and repair.
21. Process vessel degassing and cleaning to prepare for internal repairs.
22. Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
23. Asbestos abatement projects regulated by 326 IAC 14-10.
24. Purging of gas lines and vessels that is regulated to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
25. Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
26. Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
27. On-site fire and emergency response training approved by the department.
28. Diesel emergency generators not exceeding 1600 horsepower.
29. Stationary fire pumps.
30. Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations [326 IAC 6-1-2]
31. Filter or coalescer media changeout.
32. A laboratory as defined in 326 IAC 2-7-1(21)(D).

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Operation Permits No. 4198 through 4306, issued on September 15, 1994, modified on May 12, 1995, and expired on December 31, 1995.
- (b) Operation Permit No. 4347 issued on October 6, 1994, modified on May 12, 1995, and expired on December 31, 1995.
- (c) Operation Permit No. 4226 issued on September 15, 1994, modified on June 4, 1999, and expired on December 31, 1999.
- (d) Operation Permit No. 01227 issued on October 2, 1998 and expired on December 31, 1998.
- (e) Operation Permit No. 00001 issued on January 31, 1996 and expired on December 31, 1996.
- (f) Significant Source Modification 089-14389-00203 issued September 19, 2001 and incorporated into this Technical Support Document (TSD) for the pending Part 70 Permit.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively incomplete Part 70 permit application for the purposes of this review was received on December 13, 1996. Additional information received on June 20, 1997 makes the Part 70 permit application administratively complete. An updated application was submitted by Cargill on March 3, 2003.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (42 pages total).

Potential To Emit

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

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM-10	> 100
SO ₂	> 100
VOC	> 100
CO	> 250
NO _x	> 250

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAPs	Potential To Emit (tons/year)
Toluene	> 10
Propylene Oxide	> 10
Hydrochloric Acid	> 10
Formaldehyde	< 10
Acetaldehyde	< 10
Total	> 25

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM10, SO2, and NOx are equal to or greater than 100 tons per year and VOC equal to or greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2001 OAQ emission data:

Pollutant	Actual Emissions (tons/year)
PM	290
PM-10	289
SO ₂	346
VOC	283
CO	162
NO _x	325
HAP	18

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 operating permit.

Process/facility	Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
BCD Area	3.5	3.5	0.01	2.0	0.72	0.86	2.0
Grind and Feedhouse Area	131	130	156	300	74	87.6	---
Utility Area	234	234	3,033	15	127	1119	0.16
Refinery Area	38	38	---	3.9	2	8	3.9
Starch Production Area	62	62	---	12	17	31	10
Starch Warehouse Area	6	6	---	---	---	---	---
Hydroxypropyl Cyclodextrin	0.1	0.1	---	1.2	0.2	0.9	1.1
Channel 3 Refinery Area	0.2	0.2	---	---	---	---	---
Total Emissions	475	474	3,189	334	221	1247	17

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM-10	Moderate Nonattainment
SO ₂	Primary Nonattainment
NO _x	Unclassifiable/Attainment
Ozone	Severe Nonattainment
CO	Unclassifiable/Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as severe nonattainment for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) Lake County has been classified as Primary Nonattainment for SO₂. Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
 - (1) 40 CFR 60, Subpart DD, Standards of Performance for Grain Elevators, does not apply because they do not have a permanent grain storage capacity of one (1) million bushels.
 - (2) 40 CFR 60, Subparts Db and Dc, Standards of Performance for Steam Generating Units, do not apply because the boilers at Cargill were installed prior to the applicability dates.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.
- (c) The requirements of Section 112(j) of the Clean Air Act (40 CFR 63.50 through 63.56) are applicable to this source because the source is a major source of HAPs (i.e., the source has the potential to emit 10 tons per year or greater of a single HAP or 25 tons per year or greater of a combination of HAPs) and the source includes one or more units that belong to one or more source categories affected by the Section 112(j) Maximum Achievable Control Technology (MACT) Hammer date of May 15, 2002.

This rule requires the source to:

- (1) Submit a Part 1 MACT Application by May 15, 2002; and
- (2) Submit a Part 2 MACT Application for each affected source category in accordance with the appropriate Part 2 MACT Application deadline listed in Table 1 of 40 CFR 63, Subpart B for the affected source category.

The Permittee submitted a Part 1 MACT Application on May 16, 2002.

Pursuant to 40 CFR 63.56(a), the Permittee shall comply with an applicable promulgated MACT standard in accordance with the schedule provided in the MACT standard if the MACT standard is promulgated prior to the Part 2 MACT Application deadline or prior to the issuance of a permit with a case-by-case Section 112(j) MACT determination. The MACT requirements include the applicable General Provisions requirements of 40 CFR 63, Subpart A. Pursuant to 40 CFR 63.9(b), the Permittee shall submit an initial notification not later than 120 days after the effective date of the MACT, unless the MACT specifies otherwise. The MACT and the General Provisions of 40 CFR 63, Subpart A will become new applicable requirements, as defined by 326 IAC 2-7-1(6), that must be incorporated into the Part 70 permit. After IDEM, OAQ receives the initial notification, any of the following will occur:

- (1) If three (3) or more years remain on the Part 70 permit term at the time the MACT is promulgated, IDEM, OAQ will notify the source that IDEM, OAQ will reopen the permit to include the MACT requirements pursuant to 326 IAC 2-7-9; or

- (2) If less than three (3) years remain on the Part 70 permit term at the time the MACT is promulgated, the Permittee must include information regarding the MACT in the renewal application, including the information required in 326 IAC 2-7-4(c); or
 - (3) The Permittee may submit an application for a significant permit modification under 326 IAC 2-7-12 to incorporate the MACT requirements. The application may include information regarding which portions of the MACT are applicable to the emission units at the source and which compliance options will be followed.
- (d) Cargill has pollutant specific emissions units:
- (1) with the potential to emit before controls equal to or greater than one hundred (100) tons per year, and
 - (2) that are subject to emission limits and have control devices that are necessary to meet those limits.

Therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are applicable. Emission units with a potential to emit of one hundred (100) tons per year after control will be reviewed during the Part 70 permit renewal process.

State Rule Applicability - Entire Source

326 IAC 1-5 (Episode Alert Levels)

This source is subject to this rule because it has the potential to emit one hundred (100) tons per year or more of PM, PM10 and NOx. Pursuant to this rule, all persons responsible for the operation of an affected source shall prepare and implement an emergency reduction plan consistent with safe operating procedures. Upon direct notification by the commissioner or authorized representative that a specific air pollution episode level is in effect, the source shall immediately put into effect the actions stipulated in the approved ERP. The source submitted an ERP on February 26, 1991.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements)

This source is a major stationary source for the purposes of PSD because it has the potential to emit two hundred fifty (250) tons per year or more of an air pollutant subject to regulation under the CAA. It is not one of the 28 listed source categories. The source has not been reviewed under the requirements of 326 IAC 2-2 because it was in existence prior to 1977 and there has not been a major modification, as defined in these rules, subject to the requirements of 326 IAC 2-2.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements)

Pursuant to 326 IAC 2-2, the emissions of hydrogen sulfide (H₂S) from the wastewater treatment plant shall not exceed ten (10) tons per year. Virtually all the H₂S in the biogas stream is converted to SO₂ either at a plant process burner for energy recovery or at the biogas flare. Therefore, it will be required that the biogas stream be diverted to a plant process burner or to the biogas flare at all times that a biogas stream exists. A flame presence shall be monitored when the gas stream is going to the biogas flare.

326 IAC 2-3 (Emission Offset)

The IDEM, OAQ has information that indicates that some emission units are subject to the requirements of 326 IAC 2-3 (Emission Offset). Therefore, the following language has been added to the D sections that contain emission units that may be subject to the requirements of 326 IAC 2-3:

The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 2-3 (Emission Offset) and/or 326 IAC 8-1-6 (New facilities, general reduction requirements (BACT)). Therefore, the Permit Shield provided by Condition B.13 of this permit does not apply to those emission units with regards to 326 IAC 2-3 and 326 IAC 8-1-6. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-3 or 326 IAC 8-1-6 and a schedule for achieving compliance with such requirements.

326 IAC 2-4.1-1 (New Source Toxics Control)

This source is not subject to 326 IAC 2-4.1-1 (New Source Toxics Control) because there has not been a construction or reconstruction of a major source of hazardous air pollutants (HAP) as defined in 40 CFR 63.41, since the applicable date of July 27, 1997.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than 10 tons per year of VOC and is located in Lake County, and it has the potential to emit more than 100 tons per year of PM, PM10, and NOx. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirements as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity)

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

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-1-10.1(l) through (r) (Continuous Compliance Plan)

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (l), the Permittee shall submit to IDEM – OAQ and HDEM, and maintain at the source a copy of the Continuous Compliance Plan (CCP). The Permittee shall perform the inspections, monitoring, and record keeping requirements as specified in 326 IAC 6-1-10.1(m) through (r) or according to the Permittee's CCP. The source has submitted a CCP originally on December 8, 1993 and a revised copy in September 1996. The CCP has been verified to fulfill the requirements of 326 IAC 6-1-10.1(m) through (r) (CCP contents and requirements).

326 IAC 6-1-11.1 (Lake County fugitive particulate matter control requirements)

Pursuant to this rule, the average instantaneous opacity of fugitive particulate emissions from a paved road, parking lots, unpaved roads, and parking lots shall not exceed ten percent (10%). Pursuant to subsection (d), the source submitted a fugitive control plan in November, 1988 and updated the plan in August, 2002 for their Part 70 permit. Pursuant to subsection (e)(4), this company keeps the associated documentation at the source and available upon request from this Department.

326 IAC 6-1-11.2 (Lake County Particulate Matter Contingency Measures)

Pursuant to this rule, the Permittee shall comply with the applicable provisions of 326 IAC 6-1-11.2 (Lake County Particulate Matter Contingency Measures).

326 IAC 6-4 (Fugitive Dust Emissions)

This source is subject to 326 IAC 6-4 for fugitive dust emissions. Pursuant to this rule, fugitive particulate matter emissions shall not visibly cross the property lines.

326 IAC 6-5 (Fugitive Particulate Matter Emissions)

326 IAC 6-5, for fugitive particulate matter emissions, does not apply because the source is located in Lake County and does not have the potential fugitive particulate matter emissions of twenty-five (25) tons per year or more.

326 IAC 8-6 (Organic Solvent Emission Limitations)

326 IAC 8-6 does not apply because no sources of VOC listed in this rule were constructed between 1974 and 1980 and all other VOC sources existing as of 1980 are limited by other rules in this article (326 IAC 8).

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

VOC Emissions [326 IAC 8-1-6] [326 IAC 2-3] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units at this source are subject to the requirements of 326 IAC 2-3 (Emission Offset) and/or 326 IAC 8-1-6 (New facilities, general reduction requirements (BACT)). Therefore, the Permit Shield provided by Condition B.13 of this permit does not apply to those emission units with regards to 326 IAC 2-3 and 326 IAC 8-1-6. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-3 or 326 IAC 8-1-6 and a schedule for achieving compliance with such requirements.

326 IAC 8-7 (Specific VOC Reductions Requirements for Lake, Porter, Clark, and Floyd Counties)

VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units at this source are subject to the requirements of 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties). Therefore, the Permit Shield provided by Condition B.13 of this permit does not apply to those emission units with regards to 326 IAC 8-7. On February 27, 1995, the source submitted to IDEM, OAQ a Reasonably Achievable Control Technology (RACT) plan pursuant to 326 IAC 8-7-2. A revised RACT plan was requested and submitted by the source on August 22, 2003. The IDEM, OAQ is currently reviewing the RACT plan submitted. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 8-7 and a schedule for achieving compliance with such requirements.

State Rule Applicability - Individual Facilities

326 IAC 3-5-1 (Monitoring Requirements)

Pursuant to subsection (b)(2) of this rule, Boilers #2 and #6 are subject to this rule because they are fossil fuel-fired steam generators with greater than 100 MMBtu/hr heat input capacity. However, no monitoring requirements of subsection (c)(2) apply to these facilities because Boiler #2 is required to burn natural gas only by 326 IAC 6-1-10.1(h)(3) and Boiler #6 meets the monitoring requirements through the record keeping and reporting required by 326 IAC 7-2-1 and 326 IAC 7-4-1.1.

326 IAC 6-1-2 (Nonattainment Area Limitations)

326 IAC 6-1-2(a) (Particulate emission limitations, general sources)

Pursuant to subsection (a) of this rule, all facilities, not limited by subsections (b) through (g) of this section (326 IAC 6-1-2) shall not allow or permit discharge to the atmosphere of any gases which contain particulate matter in excess of 0.03 grains per dry standard cubic foot (dscf). This rule excludes emission units specifically listed in section 7 (326 IAC 6-1-10.1, Lake County PM10 emission requirements). Therefore, 326 IAC 6-1-2(a) will apply to all particulate emission units in all D sections that do not have already have specific PM10 limitations per 326 IAC 6-1-10.1(d) or some other more stringent emission limitation.

326 IAC 6-1-2(h)(1) (Particulate emission limitations, continued)

The company submitted a request for a PM10 SIP revision in October, 1996 based on grain loading to the atmosphere (gr/dscf) for the items listed in 326 IAC 6-1-10.1(d), Lake County PM10 rules. IDEM requested that modeling be performed to demonstrate that the SIP revision would not cause a significant increase in ambient concentrations at any point off their site. Lake County was moderate non-attainment for PM10 at the time of there submittal. For PM10, the "significance" levels were defined as 10µg/m³ for a 24-hour average and 5µg/m³ for an annual averaging period.

The Level II PM10 Dispersion Modeling Analysis submitted to IDEM and HDEM demonstrated that the significance levels would not be exceeded after approval of the proposed SIP revision. The facilities were modeled at the proposed 0.01 and 0.02 gr/dscf. The revision was approved and the U.S. EPA published its approval notice on July 18, 2001. The revision changed their existing PM10 limitations of pounds per ton (lbs/ton) to the more accepted industry standard of grains per dry standard cubic feet (gr/dscf). These are the units of measurement used in the guarantees provided by the suppliers of particulate control equipment. Overall, the new limitations were more stringent.

326 IAC 6-1-2(a) limits particulate emissions (PM) from general sources to 0.03 gr/dscf.

326 IAC 6-1-2(h)(1) states that, based on modeling analysis available to the commissioner, where it is determined that the above limitations (0.03 gr/dscf) are not adequate to achieve and maintain the ambient particulate air quality standards established by 326 IAC 1-3, those limitations set forth in this section (326 IAC 6-1-2) may be changed for (1) facilities having a significant impact on air quality and located in areas where the ambient particulate standard is either not attained or will not be maintained without emission limitations in addition to those set forth in this section.

Therefore, pursuant to subsection (h)(1) of this rule, emissions from the following facilities will be limited to emissions after control of 0.005, 0.01, and 0.015 gr/dscf as submitted in their respective permit applications and guaranteed by their control equipment providers. These limitations are for new units, units that replace items in the PM10 SIP, and for modifications subsequent to the SIP revision. These grain loading submissions are more stringent than existing PM and PM10 limitations and are also used by the company to determine actual emissions after control as submitted in their annual emission statement.

Based on the calculations, the emissions after controls will meet the above limitations. New and modified units will comply with these limitations, provided the control equipment is properly maintained and operating at all times when the systems are in operation. These conditions are standard language and are incorporated in the D sections for all particulate control equipment.

Grind and Feedhouse Area – Significant Source Modification 089-14389-00203 issued Sept., 2001.

Gluten Ring Dryer: 0.015 gr/dscf
 Fluid Bed Germ Dryer: 0.015 gr/dscf
 Hammermill #1: 0.005 gr/dscf
 Hammermill #2: 0.005 gr/dscf
 Loose Feed Bin Vent: 0.005 gr/dscf
 Pellet Cooler #1: 0.015 gr/dscf
 Pellet Cooler #2: 0.015 gr/dscf
 Germ Silo: 0.005 gr/dscf
 Gluten Silo: 0.005 gr/dscf
 Loose Feed Silo: 0.005 gr/dscf
 Pellet Silo #1: 0.005 gr/dscf
 Pellet Silo #2: 0.005 gr/dscf
 Bulk Loadout: 0.005 gr/dscf
 Central Vacuum Pelletizing: 0.005 gr/dscf
 Central Vacuum Loadout: 0.005 gr/dscf

Starch Warehouse Area – Minor Source Modification 089-12593-00203 issued September, 2000.

Channel 2 Receiver: 0.005 gr/dscf; 0.10 lbs/hr
 Channel 3 Receiver: 0.005 gr/dscf; 0.10 lbs/hr
 Channel 4 Receiver: 0.005 gr/dscf; 0.10 lbs/hr
 Channel 6 Receiver: (Dextrin): 0.005 gr/dscf; 0.10 lbs/hr
 Channel 4/6 Packing: (Dextrin): 0.005 gr/dscf; 0.51 lbs/hr
 Channel 2/3 Packing: 0.005 gr/dscf; 0.51 lbs/hr

Channel 3 Refinery Area – Construction Permit 01230 issued November, 1998.

Diatomaceous Earth Unloading: 0.01 gr/dscf
 Diatomaceous Earth Transfer System: 0.01 gr/dscf
 Frodex Buffer Silo: 0.01 gr/dscf
 Frodex Transfer: 0.01 gr/dscf
 Silo Dust Collectors: 0.01 gr/dscf
 Citric Acid Dump Station: 0.01 gr/dscf

326 IAC 6-1-10.1 Lake County PM10 emission requirement

Pursuant to section (d)(4) of this rule, the following facilities located at Cargill, Inc. shall comply with the corresponding PM10 and total suspended particulates (TSP) emission limitations and other requirements in this section consistent with the provisions as applicable in subsection (k). Each emission limit applies to one (1) stack serving one (1) facility unless otherwise noted. The emission limitations apply to one (1) stack serving the multiple units specified when the facility description notes “stack serving”, and to each stack of multiple stacks serving multiple facilities when the facility description notes “each stack serving”.

	Stack Number	lbs/hr	gr/dscf
Stack serving boiler numbers 6 and 7	10-03-U-P and 10-04-U-P	30.3	
Stack serving boiler numbers 8 and 10	10-05-U-P and 10-06-U-P	22.7	

Activated carbon regenerating furnace	15G-01-R-F	0.34	0.01
Bulk carbon/bulk filter aid system	17-03-R-P	0.06	0.01
Corn syrup solids dust collection system number 2	18-03-R-P	0.30	0.01
Special starch (P. G.) manufacturing equipment system number 1	18-06-S-P	0.17	0.01
Special starch (P. G.) manufacturing equipment system number 2	18-07-S-P	0.084	0.01
Special starch (P. G.) manufacturing equipment system number 3C	18-08-S-P	0.12	0.01
Special starch (P. G.) manufacturing equipment system number 3D	18-09-S-P	0.12	0.01
Gluten ring dryer #1	19-03-G-P	4.76	0.015
Receiver for first stage germ dryer	21A-01-G-P	0.12	0.015
First stage germ dryer exhaust	21A-02-G-P	0.67	0.01
Equipment conveying corn dirt to dirt storage silo	30-16-G-P	0.06	0.01
Waxy feed conveyor system	31-02-G	0.27	0.01
Finished gluten conveying system (Tanks 2 or 3)	31-10-G-P or 31-11-G-P	0.19	0.02
Gluten receiver	31-13-G(3/95)	0.23	0.02
Germ Storage Silo	31-14-G(10/95)	0.097	0.01
Corn receiving and storage-bin vent #5	33-01-G(12/95)	0.171	0.02
Corn receiving and storage-bin vent #6	33-02-G(12/95)	0.171	0.02
Corn cleaner	33-03-G(12/95)	0.21	0.01
Dextrin incoming starch, building 34	34-01-S-P	0.04	0.01
Dextrin starch reactor #1	34-02-S-P	0.180	0.01
Dextrin starch cooler #1	34-03-S-P	0.042	0.01
Dextrin storage hopper, building 34	34-05-S-P	0.11	0.01
Dextrin Feed Hoppers: 1 and 2 (System 1) Dextrin air lock feeder	34-06-S and 34-07-S (12/92)	0.030	0.01
Dextrin starch cooler	34B-01-S (10/93)	0.042	0.01
Dextrin storage hopper	34B-03-S (10/93)	0.114	0.01
Dextrin starch reactor #2	34B-04-S (10/93)	0.179	0.01
Dextrin feed hoppers: 3 and 4 (System 2) #1 and #2 Dextrin air lock feeder	34B-05-S and 34B-06-S (10/93)	0.030	0.01
Dextrin incoming starch Batch scale hopper No. 2	34B-13-S (10/93)	0.067	0.01
Feed receiver	35-05-G	0.568	0.01
Dextrin bulk loading equipment	48-09-S-P	0.26	0.01
Receiver for second stage germ dryer	51A-01-G-P	0.19	0.02
Second stage germ dryer exhaust	51A-02-G-P	1.01	0.015
Sulfate bag dumping	52-02-S-P	0.20	0.01
Starch milling system number 1	59-01-S-P	0.43	0.01
Starch milling system number 2	59-02-S-P	0.43	0.01
Starch ring dryer number 2	59-03-S-P	3.50	0.006
Stack serving starch bulk loading equipment (receiver)	76-02-S-P	0.17	0.01
Stack serving starch bulk loading equipment (Railcar loading)	76-03-S-P	0.17	0.01
Stack serving special starch (P.G.) manufacturing equipment system	85-01-S-P	0.24	0.01
Fiber drying equipment	89-01-G(10/95)	4.50	0.01
Wet fiber cyclone receiver	89-02-G(10/95)	0.178	0.01
Rotary feed dryer	89-03-G(10/95)	4.5	0.03
Milled feed hopper	89-04-G(10/95)	0.50	0.01
Feed pelletizing B	91-14-G-P	2.10	0.015
Feed pelletizing C	91-15-G-P	2.10	0.015
Feed pelletizing D	91-16-G-P	0.23	0.01
Starch conveying system number 46	93-01-W-P	0.17	0.01

Starch conveying system 47	93-02-W-P	0.17	0.02
Dextrin conveying system 48	93-03-W-P	0.17	0.01
Dried corn syrup conveying system, frodex	93-04-W-P	0.069	0.01
Corn syrup solids conveyor equipment	93-05-W-P	0.066	0.01
Stack serving starch packing systems number 1 and 2, building 93 (43 and 44)	93-06-W-P and 93-07-W-P	0.23	0.01
Frodex semibulk packing system, building 93	93-08-W-P	0.083	0.01
Each stack serving bag dump numbers 1 and 2	93-09-W-P and 93-10-W-P	0.10	0.01
Starch bulk loading	93-14-W (2/93)	0.273	0.01
Starch vacuum clean-up system	93-15-W(2/93)	0.021	0.01
Starch mixing and bagging system #1	93-16-W(5/95)	0.130	0.01
Starch mixing and bagging system #2	93-17-W(5/95)	0.264	0.01
New corn syrup spray dryer cooler system number 3 (SIP #2)	100-01-R-P	4.96	0.015
#4 corn syrup spray dryer	100-03-R(93)	4.2	0.01
Carbon regeneration furnace #2	104-01-R(2/96)	0.728	0.015
Soda ash tank	104-02-R(2/96)	0.154	0.02
Filter aid hopper	104-03-R(2/96)	0.044	0.02
Sodium bisulfate bag dump	104-05-R(2/96)	0.080	0.02
Each stack serving bulk corn starch storage bin numbers 20 through 36 (5 stacks may operate at one time)	120-01-S-P to 120-17-S-P	0.56	0.01
Gluten dryer system	121-01-G(3/95)	3.0	0.03
Waxy feed drum dryer scrubber	124-01-G-P	11.12	0.03
Waxy feed milling equipment	124-22-G-P	0.051	0.01
Germ dryer/cooler	124A-01-G(11/94)	1.852	0.02
Starch ring dryer number 3	125-01-S-P	3.50	0.006
Waxy bulk cornstarch storage bins numbers 95 through 98 (only 1 may operate at a time)	126-01-S-P to 126-04-S-P	0.16	0.01
BCD dryer, building 127	127-01-B-P	0.57	0.01
#1 and #2 vacuum cleaner system	127-21-B and 127-22-B(5/93)	0.031	0.01
#1 and #2 BCD storage hopper	127-23-B and 127-24-B(5/93)	0.18	0.01
BCD mill feeder hopper	127-25-B(5/93)	0.028	0.01
BCD packing hopper	127-26-B(5/93)	0.005	0.01
Special starch process with Starch dryer number 4, Building 128	128-01-S-P	3.5	0.01
Four products blending systems, building 93	130-01-S-P to 130-04-S-P	0.42	0.01
Dextrin blender	130-05-S(7/93)	0.248	0.01
Corn receiving and storage-bin vent #1 and #2	140-01-G and 140-02-G (12/95)	0.343	0.02
Corn receiving and storage-bin vent #3 and #4	140-03-G and 140-04-G (12/95)	0.343	0.02
Corn dump pit	140-05-G (12/95)	1.286	0.01
Corn scale system	140-06-G (12/95)	0.154	0.01
Corn elevator conveying	140-07-G (12/95)	0.086	0.01

326 IAC 6-1-10.1(h)(3)

Pursuant to this rule, the following combustion sources at Cargill, Inc. shall fire natural gas only and shall be limited to the following PM10 emissions:

Boiler number 1	0.003 lbs/MMBtu	0.288 lbs/hr
Boiler number 2	0.003 lbs/MMBtu	0.468 lbs/hr

326 IAC 7-4-1.1 (Lake County sulfur dioxide emission limitations)

Pursuant to section (c)(1)(A) of this rule, Boilers 6, 7, 8, and 10 shall be limited to sulfur dioxide emissions of 2.07 pounds per million Btu each (784 pounds per hour total). Pursuant to section (c)(1)(B)(i) of this rule, the company shall maintain records of average sulfur content, fuel oil usage, and boiler operating load for each hour while operating on fuel oil. Pursuant to section (c)(1)(B)(ii) of this rule, the company shall submit a report to the Department within thirty (30) days after the end of each calendar quarter containing the records listed in this clause and a calculation of the total sulfur dioxide emissions from all boilers for each hour.

326 IAC 7-2-1 Reporting requirements: methods to determine compliance

Pursuant to subsection (c)(3) of this rule, the company shall submit to IDEM and HDEM, upon request, calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate in pounds per million Btus for Boilers No. 6, 7, 8, and 10.

Pursuant to subsection (e) of this rule, fuel sampling and analysis data shall be collected pursuant to the procedures specified in 326 IAC 3-7-4 for oil combustion and these data may be used to determine compliance or noncompliance with the emission limitations contained in 326 IAC 7-1.1 or 326 IAC 7-4. Computation of calculated sulfur dioxide emission rates from fuel sampling and analysis data shall be based on the emission factors contained in U.S. EPA publication AP-42, "Compilation of Air Pollutant Emission Factors" (September 1988)*, unless other emission factors based on site-specific sulfur dioxide measurements are approved by the commissioner and the U.S. EPA.

326 IAC 8-1-6 (New facilities; general reduction requirements) (Best available control technology, BACT)

Pursuant to CP 089-01210-00203, issued July 27, 1998, the Hydroxypropyl Cyclodextrin Process (added to the existing Beta Cyclodextrin Process in 1998) is subject to 326 IAC 8-1-6 (New facilities; general reduction requirements) because it has potential emissions of 25 tons or more per year of VOC and is not otherwise regulated by other provisions of Article 8, VOC rules. The rule requires that VOC emissions be reduced using best available control technology (BACT).

The company submitted a warranty from the supplier that the thermal oxidizer will oxidize a minimum of 98% of the VOC contained in the process gas. The company requested that the thermal oxidizer be accepted as the best control option available to them at this time.

Thermal Oxidation is generally accepted as the best method of VOC control (high percent of destruction in streams less than 50,000 acfm). This determination is confirmed by the EPA handbook "Control Technologies for Hazardous Air Pollutants" (EPA 625/6-91/014). Also, the Seventh Supplement to the 1990 Edition of the RACT/BACT/LAER Clearinghouse compilation of control technology determinations (EPA 456/R-97-002) shows Thermal Oxidation to provide the highest percent control efficiency. Thermal Oxidation was accepted to be the BACT-PSD in most cases where the application was feasible.

Therefore, as conditions of operation, the thermal oxidizer shall operate at all times when the process reactor is venting. In order to maintain the manufacturer's warranted 98% control efficiency, the thermal oxidizer shall

maintain and monitor a minimum operating temperature of 1300 degrees F at a maximum flow rate of 500 acfm. The HPCD reaction is a closed process and 100% of the reactor vapors are vented to the thermal oxidizer. Therefore, with 100% capture efficiency, the overall control efficiency is 98%.

Since the BACT is required for this facility (HPCD) and is stated to be at least 98% according to the application submitted by the permittee and because this rule is Federally enforceable, VOC emissions will be limited to the potential to emit after control (0.25 lbs/hr equivalent to 1.1 TPY) as submitted by the permittee and calculated by this Department. Record keeping will be required.

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

VOC Emissions [326 IAC 8-1-6] [326 IAC 2-3] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units at this source are subject to the requirements of 326 IAC 2-3 (Emission Offset) and/or 326 IAC 8-1-6 (New facilities, general reduction requirements (BACT)). Therefore, the Permit Shield provided by Condition B.13 of this permit does not apply to those emission units with regards to 326 IAC 2-3 and 326 IAC 8-1-6. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-3 or 326 IAC 8-1-6 and a schedule for achieving compliance with such requirements.

326 IAC 8-7 (Specific VOC Reductions Requirements for Lake, Porter, Clark, and Floyd Counties)

VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The IDEM, OAQ has information that indicates that some emission units at this source are subject to the requirements of 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties). Therefore, the Permit Shield provided by Condition B.13 of this permit does not apply to those emission units with regards to 326 IAC 8-7. On February 27, 1995, the source submitted to IDEM, OAQ a Reasonably Achievable Control Technology (RACT) plan pursuant to 326 IAC 8-7-2. A revised RACT plan was requested and submitted by the source on August 22, 2003. The IDEM, OAQ is currently reviewing the RACT plan submitted. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 8-7 and a schedule for achieving compliance with such requirements.

Testing Requirements

Within 36 months of the issuance of this permit, a performance test shall be conducted for the facilities listed below in order to demonstrate compliance with PM10 emissions limits. The Permittee shall perform PM-10 testing utilizing methods as approved by the Commissioner.

1. BCD Dryer
2. Gluten Ring Dryer
3. Fiber Drying Equipment/Rotary Feed Dryer
4. Corn Syrup Spray Dryer #4
5. Corn Syrup Spray Dryer/Cooler #3
6. Starch Ring Dryer #2
7. Starch Ring Dryer #3
8. Special Starch Process w/Starch Ring Dryer #4

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

I. Biogas Flare

The Biogas Flare has applicable compliance monitoring conditions as specified below:

A flame presence shall be monitored during each shift using a thermal sensor at the point of the flame.

These monitoring conditions are necessary to control H₂S emissions.

II. Beta Cyclodextrin (BCD) Area and Hydroxypropyl Cyclodextrin (HPCD) Process

The BCD Area facilities have applicable compliance monitoring conditions as specified below:

- a. In order to comply with PM₁₀ and PM emissions limits, the control equipment associated with each facility shall be in operation and control emissions from the associated facility at all times that the facility is in operation.
- b. The Permittee shall maintain and monitor the operation of the Reaction and Separation condensers, at a minimum, according to the manufacturer's specifications.
- c. Visible emissions notations of each BCD Area facility stack exhaust shall be performed once per day during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

- d. The Permittee shall record the total static pressure drop across each particulate control device used in the BCD Area, at least once per day when the associated system is in operation and venting to the atmosphere. When for any one reading, the pressure drop across the control device is outside the normal range or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.

The instrument used for determining the total static pressure drop shall comply with Section C – Pressure Gauge and Other Instrument Specifications, of this permit, and shall be subject to approval by IDEM, OAQ and HDEM, and shall be calibrated at least once every six (6) months or in accordance with the manufacturer's specifications provided those specifications are available on site with the Preventive Maintenance Plan.

- e. The Permittee shall perform an inspection each calendar quarter of all dust collector bags that vent to the atmosphere. All defective bags shall be replaced.
- f. In the event that a dust collector bag failure has been observed:
For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.

For single compartment baghouses or dust collectors, if failure is indicated by a significant drop in the baghouse pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flowrates, air infiltration, leaks, or dust traces, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), 326 IAC 6-1-2(a) (Nonattainment Area Particulate Limitations), and 326 IAC 2-7 (Part 70 Permit Program).

The HPCD Process has applicable compliance monitoring conditions as specified below:

- a. In order to comply with the 326 8-1-6, the thermal oxidizer associated with HPCD Process shall be in operation and control emissions from the process at all times that it is in operation.

- b. A continuous monitoring system shall be calibrated, maintained, and operated on the regenerative thermal oxidizer for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be greater than or equal to 1300 °F at a flow rate of 500 to 1000 acfm.

These monitoring conditions are necessary to ensure compliance with 326 IAC 8-1-6 (Volatile Organic Compounds), and 326 IAC 2-7 (Part 70).

III. Grind and Feedhouse Area

The Grind and Feedhouse Area facilities have applicable compliance monitoring conditions as specified below:

- a. In order to comply with PM10 and PM emissions limits, the control equipment associated with each facility shall be in operation and control emissions from the associated facility at all times that the facility is in operation.
- b. The thermal oxidizer for VOC control shall be in operation and control emissions from the Rotary Feed Dryer at all times that the facility is in operation. The source will also be required to maintain and record a minimum operating temperature for the thermal oxidizer.
- c. Visible emissions notations of each Grind and Feedhouse Area facility stack exhaust shall be performed once per day during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
- d. The Permittee shall record the total static pressure drop across each particulate control device used in the Grind and Feedhouse Area, at least once per day when the associated system is in operation and venting to the atmosphere. When for any one reading, the pressure drop across the control device is outside the normal range or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.

The instrument used for determining the total static pressure drop shall comply with Section C – Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and HDEM, and shall be calibrated at least once every six (6) months or in accordance with the manufacturer's specifications provided those specifications are available on site with the Preventive Maintenance Plan.

- e. A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded once per day, and that temperature shall be greater than or equal to 1300 °F at a maximum flow rate of 30,000 acfm.

- f. The Permittee shall perform an inspection each calendar quarter of all dust collector bags that vent to the atmosphere. All defective bags shall be replaced.
- g. In the event that a dust collector bag failure has been observed:

For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.

For single compartment baghouses or dust collectors, if failure is indicated by a significant drop in the baghouse pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flowrates, air infiltration, leaks, or dust traces, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

- h. The Permittee shall perform an inspection each calendar quarter of all cyclones used as a control device that vent to the atmosphere.
- i. In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C – Compliance Response Plan - Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.

Scrubbers:

- j. The Permittee shall record the recirculation liquid flow rate and total static pressure drop across each scrubber used in the Grind and Feedhouse Area, once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.
- k. An inspection shall be performed each calendar quarter of all scrubbers controlling these facilities. Defective scrubber parts shall be replaced. A record shall be kept of the results of the inspection and the number of scrubber parts replaced.

- I. In the event that a scrubber's failure has been observed:
 1. The affected unit will be shut down immediately until the failed unit has been replaced.
 2. Based on the confirmed findings of an inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), 326 IAC 6-1-2(h) (Nonattainment Area Particulate Limitations), 326 IAC 6-1-2(a) (Nonattainment Area Particulate Limitations), and 326 IAC 2-7 (Part 70).

IV. Utility Area

The Utility Area facilities have applicable compliance monitoring conditions as specified below:

- a. Visible emissions notations of each Utility Area facility stack exhaust shall be performed once per day during normal daylight operations when burning fuel oil. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
- b. The Permittee shall maintain records of average sulfur content, fuel oil usage, and boiler operating load for each hour in which any boiler operates on fuel oil.
- c. The Permittee shall submit a report to the Department within thirty (30) days after the end of each calendar quarter containing the records listed above and calculations of the total sulfur dioxide emissions from all boilers for each hour.
- d. The Permittee shall include the quarterly natural gas-fired boiler certification that certifies the fuels combusted during the calendar quarter reported.

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), 326 IAC 6-1-2(b) (Particulate Matter Emission Limitations for Fuel Combustion Steam Generators), 326 IAC 2-7 (Part 70). The record keeping and reporting requirements are necessary to demonstrate compliance with 326 IAC 7-4-1.1 (c)(1)(A) and (B).

V. Refinery Area

The Refinery Area facilities have applicable compliance monitoring conditions as specified below:

- a. In order to comply with PM10 and PM emissions limits, the control equipment associated with each facility shall be in operation and control emissions from the associated facility at all times that the facility is in operation.

- b. Visible emissions notations of each Refinery Area facility stack exhaust shall be performed once per day during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
- c. The Permittee shall record the total static pressure drop across each particulate control device used in the Refinery Area, at least once per day when the associated system is in operation and venting to the atmosphere. When for any one reading, the pressure drop across the control device is outside the normal range or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.

The instrument used for determining the total static pressure drop shall comply with Section C – Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and HDEM, and shall be calibrated at least once every six (6) months or in accordance with the manufacturer's specifications provided those specifications are available on site with the Preventive Maintenance Plan.

- d. The Permittee shall perform an inspection each calendar quarter of all dust collector bags that vent to the atmosphere. All defective bags shall be replaced.
- e. In the event that a dust collector bag failure has been observed:

For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.

For single compartment baghouses or dust collectors, if failure is indicated by a significant drop in the baghouse pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flowrates, air infiltration, leaks, or dust traces, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Scrubbers:

- f. The Permittee shall record the recirculation liquid flow rate and total static pressure drop across each scrubber used in the Refinery Area once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.
- g. An inspection shall be performed each calendar quarter of all scrubbers controlling these facilities. Defective scrubber parts shall be replaced. A record shall be kept of the results of the inspection and the number of scrubber parts replaced.
- h. In the event that a scrubber's failure has been observed:
 1. The affected unit will be shut down immediately until the failed unit has been replaced.
 2. Based on the confirmed findings of an inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), 326 IAC 6-1-2(a) (Nonattainment Area Particulate Limitations), and 326 IAC 2-7 (Part 70).

VI. Starch Production Area

The Starch Production Area facilities have applicable compliance monitoring conditions as specified below:

- a. In order to comply with PM10 and PM emissions limits, the control equipment associated with each facility shall be in operation and control emissions from the associated facility at all times that the facility is in operation.
- b. The IDEM, OAQ has information that indicates that some emission units in this section are subject to the requirements of 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties). Therefore, the Permit Shield provided by Condition B.13 of this permit does not apply to those emission units with regards to 326 IAC 8-7. On February 27, 1995, the source submitted to IDEM, OAQ a Reasonably Achievable Control Technology (RACT) plan pursuant to 326 IAC 8-7-2. A revised RACT plan was requested and submitted by the source on August 22, 2003. The IDEM, OAQ is currently reviewing the RACT plan submitted. The IDEM, OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 8-7 and a schedule for achieving compliance with such requirements.
- c. Visible emissions notations of each Starch Production Area facility stack exhaust shall be performed once per day during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall

be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

- d. The Permittee shall record the total static pressure drop across each particulate control device used in the Starch Production Area, at least once per day when the associated system is in operation and venting to the atmosphere. When for any one reading, the pressure drop across the control device is outside the normal range or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.

The instrument used for determining the total static pressure drop shall comply with Section C – Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and HDEM, and shall be calibrated at least once every six (6) months or in accordance with the manufacturer's specifications provided those specifications are available on site with the Preventive Maintenance Plan.

- e. The Permittee shall perform an inspection each calendar quarter of all dust collector bags that vent to the atmosphere. All defective bags shall be replaced.
- f. In the event that a dust collector bag failure has been observed:

For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.

For single compartment baghouses or dust collectors, if failure is indicated by a significant drop in the baghouse pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flowrates, air infiltration, leaks, or dust traces, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Scrubbers:

- g. The Permittee shall record the recirculation liquid flow rate and total static pressure drop across each scrubber used in the Starch Production Area once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range or a range established during the latest stack test, the Permittee shall take reasonable response steps in

accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.

- h. An inspection shall be performed each calendar quarter of all scrubbers controlling these facilities. Defective scrubber parts shall be replaced. A record shall be kept of the results of the inspection and the number of scrubber parts replaced.
- i. In the event that a scrubber's failure has been observed:
 - 1. The affected unit will be shut down immediately until the failed unit has been replaced.
 - 2. Based on the confirmed findings of an inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), 326 IAC 6-1-2(a) (Nonattainment Area Particulate Limitations), 326 IAC 6-1-2(h) (Nonattainment Area Particulate Limitations), 326 IAC 2-7 (Part 70).

VII. Starch Warehouse Area

The Starch Warehouse Area facilities have applicable compliance monitoring conditions as specified below:

- a. In order to comply with PM10 and PM emissions limits, the control equipment associated with each facility shall be in operation and control emissions from the associated facility at all times that the facility is in operation.
- b. Visible emissions notations of each Starch Warehouse Area facility stack exhaust shall be performed once per day during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
- c. The Permittee shall record the total static pressure drop across each particulate control device used in the Starch Warehouse Area, at least once per day when the associated system is in operation and venting to the atmosphere. When for any one reading, the pressure drop across the control device is outside the normal range or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.

The instrument used for determining the total static pressure drop shall comply with Section C – Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and HDEM, and shall be calibrated at least once every six (6) months or in accordance with the manufacturer’s specifications provided those specifications are available on site with the Preventive Maintenance Plan.

- d. The Permittee shall perform an inspection each calendar quarter of all dust collector bags that vent to the atmosphere. All defective bags shall be replaced.
- e. In the event that a dust collector bag failure has been observed:

For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports, shall be considered a deviation of this permit.

For single compartment baghouses or dust collectors, if failure is indicated by a significant drop in the baghouse pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flowrates, air infiltration, leaks, or dust traces, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), 326 IAC 6-1-2(a) (Nonattainment Area Particulate Limitations), 326 IAC 6-1-2(h) (Nonattainment Area Particulate Limitations), and 326 IAC 2-7 (Part 70).

Conclusion

The operation of this Wet Corn Milling Facility shall be subject to the conditions of the attached proposed **Part 70 Permit No. T089-7994-00203**.

Cargill, Inc.
Hammond, Indiana

****NOTES****

EF: EMISSION FACTOR
CE: CONTROL EFFICIENCY

MDR: MAXIMUM DESIGN RATE
MDC: MAXIMUM DESIGN CAPACITY

Ts: STACK DISCHARGE TEMPERATURE
UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

I. Total: Stack Emissions

(Under NG)

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	5386	129259	23589	58	253	---	182	1,011	22016	216
PM10	5378	129053	23551	57	250	---	111	486	21995	214
SOx	96	2303	420	104	453	---	784	3,434	343	343
NOx	198	4759	869	198	869	---	0	0	433	433
VOC	292	7017	1281	149	654	---	0	1	483	429
CO	61	1461	267	61	267	---	0	0	133	133
HAPs (Total)	92	2213	404	4	19	---	0	0	67	14
HAPs: Toluene										
Propylene Oxide	80	1925	351	3	11				59	6
HCl										
Formaldehyde	1	22	4	1	4				4	4
Acetaldehyde	1	22	4	1	4				4	4

II. Total: Fugitive Emissions

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	2	42	8	2	8	---	0	0	8	8
PM10	3	72	13	3	13	---	0	0	13	13
SOx	6	151	28	6	28	---	0	0	#VALUE!	#VALUE!
NOx	0	0	0	0	0	---	0	0	#VALUE!	#VALUE!
VOC	153	3675	671	151	662	---	0	1	#VALUE!	#VALUE!
CO	0	0	0	0	0	---	0	0	#VALUE!	#VALUE!
HAPs (Total)	14	334	61	12	52	---	0	0	#VALUE!	#VALUE!
HAPs: Toluene	9	220	40	7	32				#VALUE!	#VALUE!
Propylene Oxide	1	27	5	1	5				5	5
HCl	1	22	4	1	4				7	7
Formaldehyde	1	33	6	1	6				6	6
Acetaldehyde	1	33	6	1	6				6	6

General Plant Area

Biogas Flare (Unit ID 800-05-E)

P2,S2

Stack ID S800-05-E

CNTRL DEV: None

MDR (lbs/hr): 2039
YEARLY PROD (lbs/yr): N/A

STACK ID (DIAM:HEIGHT): (0.67: 16)
FLOWRATE (ACFM): 1000
Ts(°F): 1400

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	SCC NO. 3-02-999-99	EF(lb/lb)	CE (%)	POTENTIAL TO EMIT					ALLOWABLE		1998 Actual Emissions		
				BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM		0	0	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00
PM10		0	0	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00
SOx		0	0	0.00	0.00	0.00	7.53	32.98	N/A			0.00	0.00
NOx		0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
VOC		0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
CO		0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
HAPs (H2S)		0.005	0.999	10.20	244.68	44.65	0.01	0.04	N/A	2.28	10.00	0.00	0.00

Groth (Model #8391A), Installed: 7/95

326 IAC 2-2 - H2S - 10 TPY

H2S emissions originate from the anaerobic generator.

biogas = 480 scfm = 28800 scf/hr

SO2 is an acceptable alternative to H2S

MDR is pounds per hour of biogas sent to a process burner or biogas flare for conversion to SO2.

28800 scf/hr x 0.0708 lbs/scf = 2039 lbs/hr biogas

Average H2S concentration is less than 0.5% in biogas stream

2039 lbs/hr @ 0.5% H2S = 10 lbs/hr x 8760hr/yr = 87600 lbs/yr = 43 TPY

Virtually all H2S converted to SO2 at plant process burner or biogas flare

99.99% of the time (normal operating procedure) biogas goes to in-plant process burner - H2S PTE is less than 0.05 TPY.

Paved Roads and Areas (Unit ID 800-04-E-F)

P2,S1

CNTRL DEV: None

MDR (VMT/hr): 4.4693699
YEARLY PROD (VMT/yr): N/A

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	(Fugitive Emissions) AP-42 (Sec. 13.2.1)	EF(LB/T)	CE (%)	POTENTIAL TO EMIT					ALLOWABLE		1998 Actual Emissions		
				BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM		0	0	0.0000	0	0.0000	0.0000	0.0000	0.0000			0.00	0.00
PM10		0.281047214	0	1.2561	30	5.5017	1.2561	5.5017	0.0000			5.50	5.50
SOx		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

Plant data based on study performed in 1989, revised May 22, 1992.

6-1-11.1(d)(1) <=10% opacity

PM10 EF = (1.256 lbs/hr) / (4.469 VMT/hr)

40 CFR 60, App. A, Method 9, and submit fugitive dust control plan

Non-combustible Source-wide SO2 emissions (Unit ID 800-06-E)

P2,S3

CNTRL DEV: None

MDR (Tons produced/hr): N/A
YEARLY PROD (T/yr): N/A

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	(Stack)	EF(LB/T)	CE (%)	POTENTIAL TO EMIT					ALLOWABLE		1998 Actual Emissions		
				BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM		0	0	0.0000	0	0.0000	0.0000	0.0000	0.0000			0.00	0.00
PM10		0	0	0.0000	0	0.0000	0.0000	0.0000	0.0000			0.00	0.00
SOx		0	0	78.1000	1,874.4000	342.0780	78.1000	342.0780	N/A			342.0780	342.0780
NOx		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

POLLUTANT	(Fugitive)	EF(LB/T)	CE (%)	POTENTIAL TO EMIT					ALLOWABLE		1998 Actual Emissions		
				BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM		0	0	0.0000	0	0.0000	0.0000	0.0000	0.0000			0.00	0.00
PM10		0	0	0.0000	0	0.0000	0.0000	0.0000	0.0000			0.00	0.00
SOx		0	0	6.3000	151.2000	27.5940	6.3000	27.5940	N/A			27.5940	27.5940
NOx		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

Ceresstar's study of SO2 emissions from various plant areas has derived 78.1 lbs/hr stack and 6.3 lbs/hr fugitive.

84.4 lbs/hr; 369.67 TPY from various building fugitives and tanks based on engineering estimates.

Source-wide Stack VOC and HAPs emissions (Unit ID 800-07-E)

P2,S4

MDR (T corn/hr): 118.29167
YEARLY PROD (T/yr): N/A

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	(Stack) EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0	0	0.0000	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00	0.00
PM10	0	0	0.0000	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00	0.00
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000	0.0000
VOC	0.8	0	94.6333	2,271.2001	414.4940	94.6333	414.4940	N/A	94.6333	414.4940	414.4940	414.4940
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000
HAPs	0.02	0	1.8082	43.3973	7.9200	1.8082	7.9200	N/A	1.8082	7.9200	7.9200	7.9200

MDR = 120,000 bushels/day (2,839 TPD)

Based on industry convention, Ceresstar assumed 0.2% of incoming corn is converted to VOC.

1/2 of VOC formed is released to the atmosphere. The remaining is released to the wastewater stream.

Of the VOC emissions released to the atmosphere, 40% is released through a stack and the remaining is released as fugitive emissions.

HAPs that are likely to be emitted are: Formaldehyde (3.96 TPY) and Acetaldehyde (3.96 TPY)

Source-wide Fugitive VOC and HAPs emissions (Unit ID 800-08-E-F)

MDR (T corn/hr): 118.29167
YEARLY PROD (T/yr): N/A

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	(Fugitive) EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0	0	0.0000	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.00	0.00	
PM10	0	0	0.0000	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.00	0.00	
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	
VOC	1.2	0	141.9500	3,406.8001	621.7410	141.9500	621.7410	N/A	141.9500	621.7410	621.7410	621.7410
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000
HAPs	0.02	0	2.7123	65.0959	11.8800	2.7123	11.8800	N/A	2.7123	11.8800	11.8800	11.8800

MDR = 120,000 bushels/day (2,839 TPD)

Based on industry convention, Ceresstar assumed 0.2% of incoming corn is converted to VOC.

1/2 of VOC formed is released to the atmosphere. The remaining is released to the wastewater stream.

Of the VOC emissions released to the atmosphere, 40% is released through a stack and the remaining is released as fugitive emissions.

HAPs that are likely to be emitted are: Formaldehyde (5.94 TPY) and Acetaldehyde (5.94 TPY)

Total: Stack Emissions - General Plant

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.000	0.000	0	0.000	0	0.000	0.000	0.000	0	0
PM10	0.000	0.000	0	0.000	0	0.000	0.000	0.000	0	0
SOx	78.100	1,874.400	342	85.630	375	#VALUE!	0.000	0.000	342	342
NOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
VOC	94.633	2,271.200	414	94.633	414	#VALUE!	0.000	0.000	414	414
CO	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
HAPs	12.003	288.077	53	1.818	8	#VALUE!	0.000	0.000	8	8
HAPs: Formaldehyde	0.904	21.699	4	0.904	4				4	4
Acetaldehyde	0.904	21.699	4	0.904	4				4	4

Total: Fugitive Emissions - General Plant

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.000	0.000	0	0.000	0	0.000	0.000	0.000	0	0
PM10	1.256	30.146	6	1.256	6	0.000	0.000	0.000	6	6
SOx	6.300	151.200	28	6.300	28	#VALUE!	0.000	0.000	28	28
NOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
VOC	141.950	3,406.800	622	141.950	622	#VALUE!	0.000	0.000	622	622
CO	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
HAPs	2.712	65.096	12	2.712	12	#VALUE!	0.000	0.000	12	12
HAPs: Formaldehyde	1.356	32.548	6	1.356	6				6	6
Acetaldehyde	1.356	32.548	6	1.356	6				6	6

BCD Area

BCD Dryer
Building 127

P1,S1; BCD Dryer (127-01-B)

MDR (T/hr): 2
YEARLY PROD (T/yr): 17520

STACK ID (DIAM:HEIGHT): 2'; 34'
FLOWRATE (ACFM): 8050
Ts(°F): 200

CNTRL DEV: Bag Filter Dust Collector (CE12701-B)

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	27.70	0.99	55.4091	1,330	242.6918	0.5541	2,4269	0.0100	1.7	7.3	242.69	2.43
PM10	27.70	0.99	55.4091	1,330	242.6918	0.5541	2,4269	0.0100	0.57	2.50	242.69	2.43
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
dP: 6 inches of water

PM10: 326 IAC 6-1-10.1(d)
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf
Stack Testing required for PM10

P1,S2; BCD Vacuum Cleaner #1, #2
(127-21-B, 127-22-B)

MDR (T/hr): 0.3
YEARLY PROD (T/yr): 2628

STACK ID (DIAM:HEIGHT): 1'; 4'
FLOWRATE (ACFM): 360
Ts(°F): 70

CNTRL DEV: Bag Filter Dust Collectors (CE127-21-B and CE127-22-B)

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	10.29	0.99	3.0857	74.0571	13.5154	0.0309	0.1352	0.0100	0.1	0.4	13.5154	0.1352
PM10	10.29	0.99	3.0857	74.0571	13.5154	0.0309	0.1352	0.0100	0.031	0.14	13.5154	0.1352
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
dP: 3 inches of water

PM10: 326 IAC 6-1-10.1(d): 0.031 lbs/hr, 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P1,S3; BCD Storage Hoppers #1, #2
(Unit ids 127-23-B and 127-24-B respectively)

MDR (T/hr): 30
YEARLY PROD (T/yr): 262800

STACK ID (DIAM:HEIGHT): 1'; 180'
FLOWRATE (ACFM): 2300
Ts(°F): 120

CNTRL DEV: Bag Filter Dust Collectors (CE127-23-B and CE127-24-B)

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.60	0.99	18.0148	432.35	78.9047	0.1801	0.7890	0.010	0.5	2.4	78.9047	0.7890
PM10	0.60	0.99	18.0148	432.35	78.9047	0.1801	0.7890	0.010	0.180	0.788	78.9047	0.7890
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
Maximum throughput per hopper is 78,840 TPY
dP: 44 inches of water

PM10: 326 IAC 6-1-10.1(d): 0.18 lbs/hr, 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P1,S4; BCD Mill Feeder Hopper (127-25-B)

MDR (T/hr): 0.836
YEARLY PROD (T/yr): 7318.98

STACK ID (DIAM:HEIGHT): 1'; 155'
FLOWRATE (ACFM): 380
Ts(°F): 160

CNTRL DEV: Bag Filter Dust Collector (CE127-25-B)

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	3.33	0.99	2.7843	66.8240	12.1954	0.0278	0.1220	0.010	0.1	0.4	12.195	0.122
PM10	3.33	0.99	2.7843	66.8240	12.1954	0.0278	0.1220	0.010	0.028	0.123	12.195	0.122
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
dP: 44 inches of water

PM10: 326 IAC 6-1-10.1(d): 0.028 lbs/hr, 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P1:S5: BCD Packing Hopper (127-26-B)

MDR (T/hr): 2
YEARLY PROD (T/yr): 17520

STACK ID (DIAM.HEIGHT): 1'; 10'
FLOWRATE (ACFM): 65
Ts(°F): 120

CNTRL DEV: Bag Filter Dust Collector

SCC NO. 03-02-014-01			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)			BEFORE CONTROLS	AFTER CONTROLS	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0.25	0.99	0.5091	12.2187	2.2299	0.0051	0.0223	0.0100	0.02	0.1		2.2299	0.022		
PM10	0.25	0.99	0.5091	12.2187	2.2299	0.0051	0.0223	0.0100	0.005	0.022		2.2299	0.022		
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				0.0000	0.0000		
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				0.0000	0.0000		
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				0.0000	0.0000		
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				0.0000	0.0000		
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				0.0000	0.0000		

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.005 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P1:S6: Unit ID 127-03-B

MDR (T/hr): 6.46
YEARLY PURCHASE (T/yr): N/A

STACK ID (DIAM.HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

CNTRL DEV: None

SCC NO. 03-02-007-52			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)			BEFORE CONTROLS	AFTER CONTROLS	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.000		
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.000		
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				#VALUE!	#VALUE!		
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				#VALUE!	#VALUE!		
VOC	0.32	0.94	2.0614	49.4744	9.0291	0.1237	0.5417	N/A	0.225	0.986		#VALUE!	#VALUE!		
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				#VALUE!	#VALUE!		
HAP	0.32	0.94	2.0614	49.4744	9.0291	0.1237	0.5417	N/A				#VALUE!	#VALUE!		

HAP: Toluene

326 8-7 (RACT)

127-03-B BCD Reaction and Separation Process: toluene fugitive emissions from leaking valves, flanges, pump seals, agitators, etc.

CE127-03-B(a) (Doyle and Roth Mfg. Co Model 31106 shell and tube type Condenser using filtered lake water: Maximum outlet concentration of toluene is 4.5 lbs/hr according to the Manufacturer's specs. Monitor temperature.
CE127-03-B(b) by-product stripper shell and tube type condenser using cooling water: Maximum outlet concentration of toluene is 0.225 lbs/hr according to engineering calculations. Monitor temperature.

raw material (toluene) feed rate is 2.06 lbs/hr

raw material (starch slurry) feed rate 12,929 lbs/hr

EF = 2.06 lbs/hr ÷ 6.46 T/hr = .32 lbs/T

P1:S6: Unit ID 127-04-B

MDR (T/hr): 0.0009
YEARLY PURCHASE (T/yr): 7.277
(All Toluene Emissions)

STACK ID (DIAM.HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

CNTRL DEV: None

Vent through general building ventilation

(Fugitive Emissions)

SCC NO. 03-02-007-52			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)			BEFORE CONTROLS	AFTER CONTROLS	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.000		
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.000		
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				0.0000	0.0000		
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				0.0000	0.0000		
VOC	2000	0	1.7000	40.8000	7.4460	1.7000	7.4460	N/A				7.2770	7.2770		
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				0.0000	0.0000		
HAP	2000	0	1.7000	40.8000	7.4460	1.7000	7.4460	N/A				7.2770	7.2770		

Emissions based on SOCM factors

P1:S6: Unit ID 127-05-B

MDR (T/hr): 0.003
YEARLY PURCHASE (T/yr): 0.000

STACK ID (DIAM.HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

CNTRL DEV: None

(Fugitive Emissions)

SCC NO. 03-02-007-52			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)			BEFORE CONTROLS	AFTER CONTROLS	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.000		
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.000		
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				0.0000	0.0000		
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				0.0000	0.0000		
VOC	2000	0	5.4000	129.6000	23.6520	5.4000	23.6520	N/A				0.0000	0.0000		
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A				0.0000	0.0000		
HAP	2000	0	5.4000	129.6000	23.6520	5.4000	23.6520	N/A				0.0000	0.0000		

Emissions based on SOCM factors

Total: Stack Emissions - BCD Area

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	79.803	1,915.273	350	0.798	3	0.050	2.394	10.486	350	3
PM10	79.803	1,915.273	350	0.798	3	0.050	0.814	3.565	350	3
SOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
NOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
VOC	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
CO	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
HAPs	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0

No HAPs

Total: Fugitive Emissions - BCD Area

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.000	0.000	0	0.000	0	0.000	0.000	0.000	0	0
PM10	0.000	0.000	0	0.000	0	0.000	0.000	0.000	0	0
SOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	#VALUE!	#VALUE!
NOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	#VALUE!	#VALUE!
VOC	9.161	219.874	40	7.224	32	#VALUE!	0.225	0.986	#VALUE!	#VALUE!
CO	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	#VALUE!	#VALUE!
HAPs	9.161	219.874	40	7.224	32	#VALUE!	0.000	0.000	#VALUE!	#VALUE!

HAPs: Toluene

Grind and Feedhouse Area

Gluten Dryer System (121-01-G)

MDR (T/hr): 7.5
YEARLY PROD (T/yr): 57442

STACK ID (DIAM.HEIGHT): 3'; 100'
FLOWRATE (ACFM): 9,570
T_s(°F): 179

CNTRL DEV: Barr-Murphy Scrubber

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	4.50	0.94	33.75	810.00	147.83	2.03	8.87	0.03	129.24	7.75
PM10	4.50	0.94	33.75	810.00	147.83	2.03	8.87	0.03	129.24	7.75
SOx	0.12	0	0.90	21.60	3.94	0.90	3.94	N/A	0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
VOC	0.47	0	3.53	84.60	15.44	3.53	15.44	N/A	0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00

EF: back calculated using manufacturer's specifications of 0.03 gr/dscf grain loading
Actual Emissions based on 0.03 gr/dscf, and 8760 hrs/yr (company submittal)

Gluten Dryer (121-01-G)

In-Process Fuel Combustion

MDC (mmBtu/hr): 12.5
MDR (mmcf/hr): 0.0125

HEAT CONTENT (Btu/cf): 1000
QTY BURNED (mmcf/yr): 41.03

STACK ID (DIAM.HEIGHT): 3'; 100'
FLOWRATE (ACFM): 9,570
T_s(°F): 179

CNTRL DEV: NONE

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(lbs/mmcf)	CE (%)	POTENTIAL TO EMIT						1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PM10	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOx	0.6	0	0.01	0.18	0.03	0.01	0.03	N/A	0.01	0.01
NOx	100	0	1.25	30.00	5.48	1.25	5.48	N/A	2.05	2.05
VOC	5.5	0	0.07	1.65	0.30	0.07	0.30	N/A	0.11	0.11
CO	84	0	1.05	25.20	4.60	1.05	4.60	N/A	1.72	1.72
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00

EF: based on AP-42
Emissions based on company's submittal of 8760 hours/year

Total: Gluten Dryer System

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	33.75	810.00	147.83	2.03	8.87	0.03	3.00	13.14	129.24	7.75
PM10	33.75	810.00	147.83	2.03	8.87	0.03			129.24	7.75
SOx	0.91	21.78	3.97	0.91	3.97	#VALUE!			0.01	0.01
NOx	1.25	30.00	5.48	1.25	5.48	#VALUE!			2.05	2.05
VOC	3.59	86.25	15.74	3.59	15.74	#VALUE!			0.11	0.11
CO	1.05	25.20	4.60	1.05	4.60	#VALUE!			1.72	1.72
HAPs	0.00	0.00	0.00	0.00	0.00	#VALUE!			0.00	0.00

326 IAC 6-1-10.1(d)

Hammermill #1 (201-01-G)

MDR (T/hr): 20
YEARLY PROD (T/yr): 175200

STACK ID (DIAM.HEIGHT): 1.5'; 94'
FLOWRATE (ACFM): 4000
T_s(°F): 140

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.76	0.99	15.14	363.43	66.33	0.15	0.66	0.005	0.91	3.98	66.33	0.66
PM10	0.76	0.99	15.14	363.43	66.33	0.15	0.66	0.005	0.15	0.66	66.33	0.66
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(h): 0.005 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Hammermill #2 (201-02-G)

MDR (T/hr): 20
YEARLY PROD (T/yr): 175200

STACK ID (DIAM.HEIGHT): 1.5'; 94'
FLOWRATE (ACFM): 4000
T_s(°F): 140

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.76	0.99	15.14	363.43	66.33	0.15	0.66	0.005	0.91	3.98	66.33	0.66
PM10	0.76	0.99	15.14	363.43	66.33	0.15	0.66	0.005	0.15	0.66	66.33	0.66
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(h): 0.005 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Loose Feed Bin Vent
(201-05-G)
CNTRL DEV: Bin Vent

MDR (T/hr): 45
YEARLY PROD (T/yr): 394,200

STACK ID (DIAM.HEIGHT): 1': 37
FLOWRATE (ACFM): 80
Ts("F): 100

			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0.01	0.99	0.32	7.79	1.42	0.003	0.014	0.005	0.019	0.085	1.421	0.014			
PM10	0.01	0.99	0.32	7.79	1.42	0.003	0.014	0.005	0.003	0.014	1.421	0.014			
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.000	0.000			
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.000	0.000			
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.000	0.000			
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.000	0.000			
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.000	0.000			

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(h): 0.005 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Pellet Cooler #1
(201-03-G)
CNTRL DEV: Cyclone

MDR (T/hr): 30
YEARLY PROD (T/yr): 262,800

STACK ID (DIAM.HEIGHT): 2.5': 94
FLOWRATE (ACFM): 17,000
Ts("F): 140

			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	6.44	0.99	193.07	4633.71	845.65	1.93	8.46	0.015	3.86	16.91	845.65	8.46			
PM10	6.44	0.99	193.07	4633.71	845.65	1.93	8.46	0.015	1.93	8.46	845.65	8.46			
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			

EF: back calculated using manufacturer's specifications of 0.015 gr/dscf grain loading
Actual Emissions based on 0.015 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(h): 0.015 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Pellet Cooler #2
(201-04-G)
CNTRL DEV: Cyclone

MDR (T/hr): 30
YEARLY PROD (T/yr): 262,800

STACK ID (DIAM.HEIGHT): 2.5': 94
FLOWRATE (ACFM): 17,000
Ts("F): 140

			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	6.44	0.99	193.07	4633.71	845.65	1.93	8.46	0.015	3.86	16.91	845.65	8.46			
PM10	6.44	0.99	193.07	4633.71	845.65	1.93	8.46	0.015	1.93	8.46	845.65	8.46			
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			

EF: back calculated using manufacturer's specifications of 0.015 gr/dscf grain loading
Actual Emissions based on 0.015 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(h): 0.015 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Corn Screening System
(30-16-G)
CNTRL DEV: Boone Group
Bin Vent Filter*

MDR (T/hr): 8
YEARLY PROD (T/yr): 70,080

STACK ID (DIAM.HEIGHT): (0.7': 50")
FLOWRATE (ACFM): 1,350
Ts("F): 70

			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0.72	0.99	5.79	138.86	25.34	0.058	0.253	0.005	0.35	1.52	25.34	0.25			
PM10	0.72	0.99	5.79	138.86	25.34	0.058	0.253	0.005	0.06	0.26	25.34	0.25			
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			

Boone Aeration & Environmental guarantee to Ceresar based on 99+% control efficiency = 0.005 gr/dscf (application).

Actual emissions based on 0.005 gr/dscf for 8760 hours; accepted by Ceresar as actual emissions and limitation (application).

*Bin Vent Filter on Corn Screenings Tank and Torit DC 3010 bag filter on the pneumatic conveyor at the turn.

dP: 6 inches of water

PM10: 326 IAC 6-1-10.1(d): 0.06 lbs/hr; 0.01 gr/dscf

PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Germ Silo
(200-03-G)
CNTRL DEV: Dust Collector

MDR (T/hr): 15
YEARLY PROD (T/yr): 131,400

STACK ID (DIAM.HEIGHT): 1': 94
FLOWRATE (ACFM): 1,200
Ts("F): 140

			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0.30	0.99	4.54	109.03	19.90	0.045	0.199	0.005	0.27	1.19	19.90	0.20			
PM10	0.30	0.99	4.54	109.03	19.90	0.045	0.199	0.005	0.05	0.20	19.90	0.20			
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(h): 0.005 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 6 inches of water

Gluten Silo
(200-04-G)
CENTRL DEV: Dust Collector

MDR (T/hr): 10.5
YEARLY PROD (T/yr): 91,980

STACK ID (DIAM.HEIGHT): 1: 94
FLOWRATE (ACFM): 1200
Ts("F): 140

SCC NO. 03-02-007-52			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0.43	0.99	4.54	109.03	19.90	0.045	0.199	0.005	0.27	1.19	19.90	0.20			
PM10	0.43	0.99	4.54	109.03	19.90	0.045	0.199	0.005	0.05	0.20	19.90	0.20			
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(h): 0.005 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Loose Feed Silo
(200-06-G)
CENTRL DEV: Dust Collector

MDR (T/hr): 5.5
YEARLY PROD (T/yr): 48180

STACK ID (DIAM.HEIGHT): 1: 94
FLOWRATE (ACFM): 400
Ts("F): 100

SCC NO. 03-02-007-52			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0.29	0.99	1.62	38.94	7.11	0.016	0.071	0.005	0.10	0.43	7.11	0.07			
PM10	0.29	0.99	1.62	38.94	7.11	0.016	0.071	0.005	0.02	0.07	7.11	0.07			
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(h): 0.005 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Waxy Feed Drum Dryer
(124-01-G)
CENTRL DEV: Wet Scrubber

MDR (T/hr): 6.4
YEARLY PROD (T/yr): 56064

STACK ID (DIAM.HEIGHT): 10: 92
FLOWRATE (ACFM): 41520
Ts("F): 135

SCC NO. 03-02-007-54			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)					
PM	148.60	0.99	951.02	22824.54	4165.48	9.51	41.65	0.03	4165.48	41.65	4165.48	41.65	
PM10	148.60	0.99	951.02	22824.54	4165.48	9.51	41.65	0.03	4165.48	41.65	4165.48	41.65	
SOx	0.268	0	1.72	41.16	0.00	1.72	7.51	N/A	0.00	0.00	0.00	0.00	
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00	
VOC	5	0	32.00	768.00	140.16	32.00	140.16	N/A	0.00	0.00	0.00	0.00	
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00	
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00	

EF: back calculated using manufacturer's specifications of 0.030 gr/dscf grain loading
Actual Emissions based on 0.03 gr/dscf, and 8760 hrs/yr (company submittal)

Waxy Feed Drum Dryer (124-01-G)
In-Process Fuel Combustion

MDR (mmBtu/hr): 35
HEAT CONTENT (Btu/cft): 1000
STACK ID (DIAM.HEIGHT): 10: 92

MDR (mmct/hr): 0.0350
QTY BURNED (mmct/yr): 115.20
FLOWRATE (ACFM): 41520

CENTRL DEV: None
Ts("F): 135

SCC NO. 03-02-007-54			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			1998 Actual Emissions	
POLLUTANT	EF(lbs/mmct)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)					
PM	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PM10	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SOx	0.6	0	0.02	0.50	0.09	0.02	0.09	N/A	0.03	0.03	0.03	0.03	
NOx	140	0	4.90	117.60	21.46	4.90	21.46	N/A	8.06	8.06	8.06	8.06	
VOC	2.8	0	0.10	2.35	0.43	0.10	0.43	N/A	0.16	0.16	0.16	0.16	
CO	35	0	1.23	29.40	5.37	1.23	5.37	N/A	2.02	2.02	2.02	2.02	
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00	

E.F. based on AP-42
Emissions based on company's submittal of 8760 hours/year

Total: Waxy Feed Drum Dryer (124-01-G)												
POLLUTANT	BEFORE CONTROLS			AFTER CONTROLS			ALLOWABLE		1998 Actual Emissions			
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS		
PM	951.02	22,824.54	4,165.48	9.51	41.65	0.03	9.51	41.65	4,165.48	41.65		
PM10	951.02	22,824.54	4,165.48	9.51	41.65	0.03	11.12	48.71	4,165.48	41.65		
SOx	1.74	41.67	7.60	1.74	7.60	N/A			0.03	0.03		
NOx	4.90	117.60	21.46	4.90	21.46	N/A			8.06	8.06		
VOC	32.10	770.35	140.59	32.10	140.59	N/A			0.16	0.16		
CO	1.23	29.40	5.37	1.23	5.37	N/A			2.02	2.02		
HAPs	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00		

PM10: 326 IAC 6-1-10.1(d): 11.12 lbs/hr; 0.03 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf
Stack Testing required for PM10

Waxy Feed Mill Equipment
(124-22-G)
CNTRL DEV: Dust Collector

MDR (T/hr): 4.6
YEARLY PROD (T/yr): 40296

STACK ID (DIAM:HEIGHT): 1'; 28"
FLOWRATE (ACFM): 600
Ts(*F): 70

SCC NO. 03-02-007-56			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)			BEFORE CONTROLS	AFTER CONTROLS	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	1.12	0.99	5.14	123.43	22.53	0.05	0.23	0.01	0.15	0.68		22.53	0.23		
PM10	1.12	0.99	5.14	123.43	22.53	0.05	0.23	0.01	0.05	0.22		22.53	0.23		
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		

EF: back calculated using manufacturer's specifications of 0.010 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.051 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 6 inches of water

Wet Feed Transfer
(124-23-G)
CNTRL DEV: Dust Collector

MDR (T/hr): 3
YEARLY PROD (T/yr): 26280

STACK ID (DIAM:HEIGHT): 1'; 120"
FLOWRATE (ACFM): 1000
Ts(*F): 70

SCC NO. 03-02-007-55			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL EMISSIONS			ALLOWABLE		COMPANY ACTUAL	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)			BEFORE CONTROLS	AFTER CONTROLS	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	2.86	0.99	8.57	205.71	37.54	0.09	0.38	0.01	0.09	0.38		37.54	0.38		
PM10	2.86	0.99	8.57	205.71	37.54	0.09	0.38	0.01	0.09	0.38		37.54	0.38		
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		

EF: back calculated using manufacturer's specifications of 0.010 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

326 IAC 6-1-2(h)

Removed: 31-02-G Finished Waxy Feed Conveyor as per review to modify Corn Screening Area and Gravity Take-up on corn Belt (900)

Dry Feed Transfer
(89-05-G)
CNTRL DEV: Dust Collector

MDR (T/hr): 3
YEARLY PROD (T/yr): 26280

STACK ID (DIAM:HEIGHT): 0.33'-44"
FLOWRATE (ACFM): 1000
Ts(*F): 70

SCC NO. 03-02-007-55			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL EMISSIONS			ALLOWABLE		COMPANY ACTUAL	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)			BEFORE CONTROLS	AFTER CONTROLS	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	2.86	0.99	8.57	205.71	37.54	0.09	0.38	0.01	0.55	2.41		37.54	0.38		
PM10	2.86	0.99	8.57	205.71	37.54	0.09	0.38	0.01	0.55	2.41		37.54	0.38		
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00		

EF: back calculated using manufacturer's specifications of 0.010 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

326 IAC 6-1-2(h)

Fiber Drying Equipment
(89-01-G)
CNTRL DEV: Scrubber

MDR (T/hr): 25
YEARLY PROD (T/yr): 219000

STACK ID (DIAM:HEIGHT): 7'; 104"
FLOWRATE (ACFM): 81705
Ts(*F): 176

SCC NO. 03-02-007-54			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			1998 Actual Emissions		
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)			BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)						
PM	0.48	0.9	12.00	288.00	52.56	1.20	5.26	0.002				52.56	5.26	
PM10	0.29	0.9	7.25	174.00	31.76	0.73	3.18	0.001				31.76	3.18	
SOx	0.39	0	9.75	234.00	42.71	9.75	42.71	N/A				0.00	0.00	
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00	
VOC	0.46	0	11.50	276.00	50.37	11.50	50.37	N/A				0.00	0.00	
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00	
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00	

EF: back calculated using manufacturer's specifications of 0.010 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
Compliance Test performed 10/2/98.

Fiber Dryer (89-01-G)
In-Process Fuel Combustion

CNTRL DEV: None

MDC (mmBtu/hr): 68
MDR (mmctf/hr): 0.0648

HEAT CONTENT (Btu/cft): 1050
QTY BURNED (mmctf/yr): 256.70

STACK ID (DIAM:HEIGHT): 7'; 104"
FLOWRATE (ACFM): 81705
Ts(*F): 176

SCC NO. 03-02-007-54			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			1998 Actual Emissions		
POLLUTANT	EF(lbs/mmctf)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)			BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)						
PM	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
PM10	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
SOx	0.6	0	0.04	0.93	0.17	0.04	0.17	N/A				0.08	0.08	
NOx	140	0	9.07	217.60	39.71	9.07	39.71	N/A				17.97	17.97	
VOC	2.8	0	0.18	4.35	0.79	0.18	0.79	N/A				0.36	0.36	
CO	35	0	2.27	54.40	9.93	2.27	9.93	N/A				4.49	4.49	
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A				0.00	0.00	

E.F. based on AP-42

Emissions based on company's submittal of 8760 hours/year

Total: Fiber Dryer (89-01-G)

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	12.00	288.00	52.56	1.20	5.26	0.002	17.51	76.69	52.56	5.26
PM10	7.25	174.00	31.76	0.73	3.18	0.001	4.50	19.71	31.76	3.18
SOx	9.79	234.93	42.88	9.79	42.88	N/A			0.08	0.08
NOx	9.07	217.60	39.71	9.07	39.71	N/A			17.97	17.97
VOC	11.68	280.35	51.16	11.68	51.16	N/A			0.36	0.36
CO	2.27	54.40	9.93	2.27	9.93	N/A			4.49	4.49
HAPs	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

PM10: 326 IAC 6-1-10.1(d): 4.50 lbs/hr; 0.01 gr/dscf

PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Stack Testing required for PM10

**Pellet Silo #1
(200-01-G)**
CNTRL DEV: Dust Collector

MDR (T/hr): 40
YEARLY PROD (T/yr): 350400

STACK ID (DIAM.HEIGHT): 1: 94
FLOWRATE (ACFM): 80
Ts("F): 140

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.01	0.99	0.30	7.27	1.33	0.003	0.013	0.005	0.018	0.080	1.33	0.013
PM10	0.01	0.99	0.30	7.27	1.33	0.003	0.013	0.005	0.003	0.013	1.33	0.013
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.000
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.000
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.000
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.000
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.000

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-2(h): 0.005 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

**Pellet Silo #2
(200-02-G)**
CNTRL DEV: Dust Collector

MDR (T/hr): 40
YEARLY PROD (T/yr): 350400

STACK ID (DIAM.HEIGHT): 1: 94
FLOWRATE (ACFM): 80
Ts("F): 140

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.01	0.99	0.30	7.27	1.33	0.003	0.013	0.005	0.018	0.080	1.33	0.013
PM10	0.01	0.99	0.30	7.27	1.33	0.003	0.013	0.005	0.003	0.013	1.33	0.013
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.000
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.000
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.000
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.000
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.000

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-2(h): 0.005 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

**Rotary Feed Dryer
(89-03-G)**
CNTRL DEV: Cyclone to Scrubber
thermal oxidizer

MDR (T/hr): 40
YEARLY PROD (T/yr): 350400

STACK ID (DIAM.HEIGHT): 5: 102
FLOWRATE (ACFM): 30000
Ts("F): 220

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	11.02	0.99	440.92	10,582.18	1,931.25	4.41	19.31	0.022			1,931.25	19.31
PM10	11.02	0.99	440.92	10,582.18	1,931.25	4.41	19.31	0.022			1,931.25	19.31
SOx	0.124	0	4.96	119.04	21.72	4.96	21.72	N/A			0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
VOC	1.65	0.99	66.00	1,584.00	289.08	0.66	2.89	N/A			0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

EF: back calculated using manufacturer's specifications of 0.022 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

controlled VOC emissions (TO) associated with organic matter volatilization
uncontrolled SO2 emissions from millhouse and steeping
disclosed during TV application process - not included in 98 actuals

Rotary Feed Dryer (89-03-G)
In-Process Fuel Combustion

CNTRL DEV: None

MDC (mmBtu/hr): 32
MDR (mmctf/hr): 0.0320
HEAT CONTENT (Btu/cft): 1000
QTY BURNED (mmctf/yr): 213.90

STACK ID (DIAM:HEIGHT): 5: 10'
FLOWRATE (ACFM): 30000
Ts(*F): 220

SCC NO. 03-02-007-54			PERMITTED OPERATING HRS: 8760 hr/yr						1998 Actual Emissions		
POLLUTANT	EF(lbs/mmctf)	CE (%)	POTENTIAL TO EMIT			AFTER CONTROLS			BEFORE CONTROLS	AFTER CONTROLS	
			BEFORE CONTROLS (lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)			
PM	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PM10	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SOx	0.6	0	0.02	0.46	0.08	0.02	0.08	N/A	0.06	0.06	
NOx	100	0	3.20	76.80	14.02	3.20	14.02	N/A	10.70	10.70	
VOC	2.8	0	0.09	2.15	0.39	0.09	0.39	N/A	0.30	0.30	
CO	35	0	1.12	26.88	4.91	1.12	4.91	N/A	3.74	3.74	
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	

E.F. based on AP-42

Emissions based on company's submittal of 8760 hours/year

Total: Rotary Feed Dryer (89-03-G)										
POLLUTANT	POTENTIAL TO EMIT			AFTER CONTROLS			ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS (lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
PM	440.9	10,582.2	1,931.2	4.4	19.3	0.022	6.0	26.3	1,931.25	19.31
PM10	440.9	10,582.2	1,931.2	4.4	19.3	0.022	4.5	19.7	1,931.25	19.31
SOx	5.0	119.5	21.8	5.0	21.8	#VALUE!			0.06	0.06
NOx	3.2	76.8	14.0	3.2	14.0	#VALUE!			10.70	10.70
VOC	66.1	1,586.2	289.5	0.7	3.3	#VALUE!			0.30	0.30
CO	1.1	26.9	4.9	1.1	4.9	#VALUE!			3.74	3.74
HAPs	0.0	0.0	0.0	0.0	0.0	#VALUE!			0.00	0.00

PM10: 326 IAC 6-1-10.1(d): 4.5 lbs/hr; 0.03 gr/dscf

PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Stack Testing required for PM10

Bulk Loadout

(200-05-G)

CNTRL DEV: Dust Collector

MDR (T/hr): 47.95
YEARLY PROD (T/yr): 419998.2

STACK ID (DIAM:HEIGHT): 3: 100
FLOWRATE (ACFM): 30000
Ts(*F): 100

SCC NO. 03-02-007-55			PERMITTED OPERATING HRS: 8760 hr/yr						1998 Actual Emissions		
POLLUTANT	EF(lb/T)	CE (%)	POTENTIAL TO EMIT			AFTER CONTROLS			BEFORE CONTROLS	AFTER CONTROLS	
			BEFORE CONTROLS (lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)			
PM	2.54	0.99	121.68	2,920.41	532.97	1.22	5.33	0.005	7.30	31.98	
PM10	2.54	0.99	121.68	2,920.41	532.97	1.22	5.33	0.005	1.22	5.33	
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	

E.F. back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-2(h): 0.005 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Central Vacuum Pelletizing

(201-06-G)

CNTRL DEV: Dust Collector

MDR (T/hr): 0.05
YEARLY PROD (T/yr): 438

STACK ID (DIAM:HEIGHT): 1: 17
FLOWRATE (ACFM): 400
Ts(*F): 100

SCC NO. 03-02-007-55			PERMITTED OPERATING HRS: 8760 hr/yr						1998 Actual Emissions		
POLLUTANT	EF(lb/T)	CE (%)	POTENTIAL TO EMIT			AFTER CONTROLS			BEFORE CONTROLS	AFTER CONTROLS	
			BEFORE CONTROLS (lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)			
PM	32.45	0.99	1.62	38.94	7.11	0.016	0.071	0.005	0.10	0.43	
PM10	32.45	0.99	1.62	38.94	7.11	0.016	0.071	0.005	0.02	0.07	
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0.00	0.00	
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0.00	0.00	
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0.00	0.00	
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0.00	0.00	
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0.00	0.00	

E.F. back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-2(h): 0.005 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Central Vacuum Loadout
(200-07-G)
CNTRL DEV: Dust Collector

MDR (T/hr): 0.05
YEARLY PROD (T/yr): 438

STACK ID (DIAM.HEIGHT): 1': 15
FLOWRATE (ACFM): 400
Ts("F): 100

SCC NO. 03-02-007-55			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	32.45	0.99	1.62	38.94	7.11	0.016	0.071	0.005	0.10	0.43	7.11	0.07			
PM10	32.45	0.99	1.62	38.94	7.11	0.016	0.071	0.005	0.02	0.07	7.11	0.07			
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.00	0.00			

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-2(h): 0.005 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Corn Receiver Storage Bins #1 and #2
(140-01-G & 140-02-G) (cement silos)
CNTRL DEV: Dust Collector

MDR (T/hr): 840
YEARLY PROD (T/yr): 7,358,400

STACK ID (DIAM.HEIGHT): 1': 30'
FLOWRATE (ACFM): 2000
Ts("F): 70

SCC NO. 03-02-007-55			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0.04	0.99	34.29	822.86	150.17	0.34	1.50	0.02	0.51	2.25	150.17	1.50			
PM10	0.04	0.99	34.29	822.86	150.17	0.34	1.50	0.02	0.34	1.50	150.17	1.50			
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			

EF: back calculated using manufacturer's specifications of 0.020 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.343 lbs/hr; 0.02 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 3 inches of water

Corn Receiving and Storage Bins #3 and #4
(140-03-G & 140-04-G) (metal silos)
CNTRL DEV: Dust Collector

MDR (T/hr): 840
YEARLY PROD (T/yr): 7,358,400

STACK ID (DIAM.HEIGHT): 1': 30'
FLOWRATE (ACFM): 2000
Ts("F): 70

SCC NO. 03-02-007-55			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0.04	0.99	34.29	822.86	150.17	0.34	1.50	0.02	0.51	2.25	150.17	1.50			
PM10	0.04	0.99	34.29	822.86	150.17	0.34	1.50	0.02	0.34	1.50	150.17	1.50			
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			

EF: back calculated using manufacturer's specifications of 0.020 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.343 lbs/hr; 0.02 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 3 inches of water

Corn Receiving and Storage Bin #5
(33-01-G) (Day Tank)
CNTRL DEV: Dust Collector

MDR (T/hr): 420
YEARLY PROD (T/yr): 3,679,200

STACK ID (DIAM.HEIGHT): 1': 100'
FLOWRATE (ACFM): 1000
Ts("F): 70

SCC NO. 03-02-007-55			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0.04	0.99	17.14	411.43	75.09	0.17	0.75	0.02	0.26	1.13	75.09	0.75			
PM10	0.04	0.99	17.14	411.43	75.09	0.17	0.75	0.02	0.17	0.75	75.09	0.75			
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00			

EF: back calculated using manufacturer's specifications of 0.020 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.171 lbs/hr; 0.02 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 3 inches of water

Corn Receiving and Storage Bin #6
(33-02-G) Day Tank
CNTRL DEV: Dust Collector

MDR (T/hr): 420
YEARLY PROD (T/yr): 3,679,200
STACK ID (DIAM.HEIGHT): 1'; 100'
FLOWRATE (ACFM): 1000
Ts(*F): 100

SCC NO. 03-02-007-55		PERMITTED OPERATING HRS: 8760 hr/yr		POTENTIAL TO EMIT					ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.04	0.99	16.22	389.39	71.06	0.16	0.71	0.02	0.24	1.07	71.06	0.71
PM10	0.04	0.99	16.22	389.39	71.06	0.16	0.71	0.02	0.17	0.75	71.06	0.71
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

EF: back calculated using manufacturer's specifications of 0.020 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)
PM10: 326 IAC 6-1-10.1(d): 0.171 lbs/hr; 0.02 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 3 inches of water

Corn Dump Pit
(140-05-G)

CNTRL DEV: Torit & Day Baghouse
(BH-1) (CE140-05-G)

MDR (T/hr): 840
YEARLY PROD (T/yr): 7,358,400
STACK ID (DIAM.HEIGHT): (3.4'; 70')
FLOWRATE (ACFM): 30000
Ts(*F): 70

SCC NO. 3-02-007-51		PERMITTED OPERATING HRS: 8,760 hr/yr		POTENTIAL TO EMIT					ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	1.53	0.999	1,285.71	30,857.14	5,631.43	1.29	5.63	0.005	7.71	33.79	5,631.43	5.63
PM10	1.53	0.999	1,285.71	30,857.14	5,631.43	1.29	5.63	0.005	1.29	5.63	5,631.43	5.63
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

Torit Donaldson guarantee to Cerestar based on 1500 lb/hr load - 99.9% control efficiency = 0.005 gr/dscf (application).
Actual emissions based on 0.005 gr/dscf for 8760 hours; accepted by Cerestar as actual emissions and limitation (application).
PM10: 326 IAC 6-1-10.1(d): 1.286 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 3 inches of water

Gravity Take-Up Conveyor (Corn Scale System)
(140-06-G)

CNTRL DEV: Dust Collector

MDR (T/hr): 840
YEARLY PROD (T/yr): 7,358,400
STACK ID (DIAM.HEIGHT): 1'; 16'
FLOWRATE (ACFM): 1800
Ts(*F): 70

SCC NO. 03-02-007-55		PERMITTED OPERATING HRS: 8760 hr/yr		POTENTIAL EMISSIONS					ALLOWABLE		COMPANY ACTUAL	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.02	0.99	15.43	370.29	67.58	0.15	0.68	0.01	0.46	2.03	67.58	0.68
PM10	0.02	0.99	15.43	370.29	67.58	0.15	0.68	0.01	0.15	0.67	67.58	0.68
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

EF: back calculated using manufacturer's specifications of 0.010 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
PM10: 326 IAC 6-1-10.1(d): 0.154 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 3 inches of water

Corn Elevator Conveying
(140-07-G)

CNTRL DEV: Dust Collector

MDR (T/hr): 840
YEARLY PROD (T/yr): 7,358,400
STACK ID (DIAM.HEIGHT): 1'; 16'
FLOWRATE (ACFM): 1000
Ts(*F): 70

SCC NO. 03-02-007-52		PERMITTED OPERATING HRS: 8760 hr/yr		POTENTIAL TO EMIT					ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.01	0.99	8.57	205.71	37.54	0.09	0.38	0.01	0.26	1.13	37.54	0.38
PM10	0.01	0.99	8.57	205.71	37.54	0.09	0.38	0.01	0.09	0.38	37.54	0.38
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
PM10: 326 IAC 6-1-10.1(d): 0.086 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 3 inches of water

Corn Cleaner
(33-03-G)

CNTRL DEV: Dust Collector

MDR (T/hr): 420
YEARLY PROD (T/yr): 3,679,200
STACK ID (DIAM.HEIGHT): 1'; 16'
FLOWRATE (ACFM): 2200
Ts(*F): 70

SCC NO. 03-02-007-55		PERMITTED OPERATING HRS: 8760 hr/yr		POTENTIAL TO EMIT					ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.04	0.99	18.86	452.57	82.59	0.19	0.83	0.01	0.57	2.48	82.59	0.83
PM10	0.04	0.99	18.86	452.57	82.59	0.19	0.83	0.01	0.21	0.92	82.59	0.83
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
PM10: 326 IAC 6-1-10.1(d): 0.21 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 3 inches of water

Germ Loadout (51-07-G-F) MDR (T/hr): 10 STACK ID (DIAM.HEIGHT): N/A
 YEARLY PROD (T/yr): 87,600 FLOWRATE (ACFM): N/A
 Ts(°F): N/A
 PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.05	0	0.50	12.00	2.19	0.500	2.190	#VALUE!	0.000	0.000	2.190	2.190
PM10	0.05	0	0.50	12.00	2.19	0.500	2.190	#VALUE!	0.00	0.00	2.190	2.190
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0	0.000	0.000	0.000
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0	0.000	0.000	0.000
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0	0.000	0.000	0.000
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0	0.000	0.000	0.000
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0	0.000	0.000	0.000

Total: Stack Emissions - Grind and Feedhouse Area

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		COMPANY ACTUAL	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	3,256.202	78,148.858	14,262.167	23.758	104.060	0.304	58.570	266.536	14,243.586	102.946
PM10	3,251.452	78,034.858	14,241.362	23.283	101.980	0.303	30.230	132.407	14,222.781	100.865
SOx	17.412	417.882	76.263	17.412	76.263	#VALUE!	0.000	0.000	0.188	0.188
NOx	18.417	442.000	80.665	18.417	80.665	#VALUE!	0.000	0.000	38.780	38.780
VOC	113.463	2,723.104	496.967	48.123	210.777	#VALUE!	0.000	0.000	0.933	0.933
CO	5.662	135.880	24.798	5.662	24.798	#VALUE!	0.000	0.000	11.975	11.975
HAPs	0.000	0.000	0.000	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000

No HAPs

Total: Fugitive Emissions - Grind and Feedhouse Area

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.500	12.000	2	0.500	2	#VALUE!	0.000	0.000	2	2
PM10	0.500	12.000	2	0.500	2	#VALUE!	0.000	0.000	2	2
SOx	0.000	0.000	0	0.000	0	N/A	0.000	0.000	0	0
NOx	0.000	0.000	0	0.000	0	N/A	0.000	0.000	0	0
VOC	0.000	0.000	0	0.000	0	N/A	0.000	0.000	0	0
CO	0.000	0.000	0	0.000	0	N/A	0.000	0.000	0	0
HAPs	0.000	0.000	0	0.000	0	N/A	0.000	0.000	0	0

No HAPs

Receiver, First Stage Germ Dryer (21A-01-G) MDR (T/hr): 7.5 STACK ID (DIAM.HEIGHT): 1', 30"
 YEARLY PROD (T/yr): 65,700 FLOWRATE (ACFM): 1000
 CNTRL DEV: Dust Collector Ts(°F): 100
 PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	1.62	0.99	12.17	292.04	53.30	0.12	0.53	0.015	0.24	1.07	53.30	0.53
PM10	1.62	0.99	12.17	292.04	53.30	0.12	0.53	0.015	0.12	0.53	53.30	0.53
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00

EF: back calculated using manufacturer's specifications of 0.015 gr/dscf grain loading
 Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.12 lbs/hr; 0.015 gr/dscf
 PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

First Stage Germ Dryer (21A-02-G) MDR (T/hr): 7.5 STACK ID (DIAM.HEIGHT): 2', 40"
 YEARLY PROD (T/yr): 65,700 FLOWRATE (ACFM): 9,000
 CNTRL DEV: cyclone and wet roto-dome Ts(°F): 150
 PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	8.90	0.99	66.75	1602.00	292.37	0.67	2.92	0.01	0.67	2.93	292.37	2.92
PM10	8.90	0.99	66.75	1602.00	292.37	0.67	2.92	0.01	0.67	2.93	292.37	2.92
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
 Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.67 lbs/hr; 0.01 gr/dscf
 PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Receiver, Second Stage Germ Dryer (51A-01-G)
CNTRL DEV: Dust Collector

MDR (T/hr): 8.5
YEARLY PROD (T/yr): 74,460

STACK ID (DIAM.HEIGHT): 1'; 35'
FLOWRATE (ACFM): 1200
Ts(°F): 100

			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		1998 Actual Emissions	
SCC NO. 03-02-007-51			POTENTIAL TO EMIT						(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS						
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	2.29	0.99	19.47	467.27	85.28	0.19	0.85	0.020	0.29	1.28	85.28	0.85
PM10	2.29	0.99	19.47	467.27	85.28	0.19	0.85	0.020	0.19	0.83	85.28	0.85
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.19 lbs/hr; 0.02 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Second Stage Germ Dryer (51A-02-G)
CNTRL DEV: cyclone and wet roto-dome

MDR (T/hr): 8.5
YEARLY PROD (T/yr): 74,460

STACK ID (DIAM.HEIGHT): 2'; 35'
FLOWRATE (ACFM): 9,000
Ts(°F): 150

			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		1998 Actual Emissions	
SCC NO. 03-02-007-54			POTENTIAL TO EMIT						(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS						
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	12.00	0.99	102.00	2448.00	446.76	1.02	4.47	0.02			446.76	4.47
PM10	12.00	0.99	102.00	2448.00	446.76	1.02	4.47	0.02	1.01	4.42	446.76	4.47
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

EF: back calculated using manufacturer's specifications of 0.015 gr/dscf grain loading
Actual Emissions based on 0.015 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 1.01 lbs/hr; 0.015 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Germ Dryer Cooler (124A-01-G)
CNTRL DEV: cyclones

MDR (T/hr): 4.15
YEARLY PROD (T/yr): 36,354

STACK ID (DIAM.HEIGHT): 3'; 101'
FLOWRATE (ACFM): 13,600
Ts(°F): 200

			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		1998 Actual Emissions	
SCC NO. 03-02-007-54			POTENTIAL TO EMIT						(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS						
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	8.90	0.95	36.94	886.44	161.78	1.85	8.09	0.020			161.78	8.09
PM10	8.90	0.95	36.94	886.44	161.78	1.85	8.09	0.020			161.78	8.09
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

Germ Dryer Cooler (124A-01-G)
In-Process Fuel Combustion

MDC (mmBtu/hr): 12.9
MDR (mmctf/hr): 0.0129
HEAT CONTENT (Btu/cft): 1000
QTY BURNED (mmctf/yr): 47.30

STACK ID (DIAM.HEIGHT): 2'; 40'
FLOWRATE (ACFM): 9,000
Ts(°F): 150

			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		1998 Actual Emissions	
SCC NO. 03-02-007-54			POTENTIAL TO EMIT						(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(lbs/mmctf)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS						
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0	0	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00
PM10	0	0	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00
SOx	0.6	0	0.01	0.19	0.03	0.01	0.03	N/A			0.01	0.01
NOx	100	0	1.29	30.96	5.65	1.29	5.65	N/A			2.37	2.37
VOC	5.5	0	0.07	1.70	0.31	0.07	0.31	N/A			0.13	0.13
CO	84	0	1.08	26.01	4.75	1.08	4.75	N/A			1.99	1.99
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

E.F. based on AP-42
Emissions based on company's submittal of 8760 hours/year

Total: Germ Dryer Cooler (124A-01-G)

			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		1998 Actual Emissions	
SCC NO. 03-02-007-54			POTENTIAL TO EMIT						(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(lbs/mmctf)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS						
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	36.94	0.95	36.94	886.44	161.78	1.85	8.09	0.02			161.78	8.09
PM10	36.94	0.95	36.94	886.44	161.78	1.85	8.09	0.02	1.85	8.11	161.78	8.09
SOx	0.01	0	0.01	0.19	0.03	0.01	0.03	#VALUE!			0.01	0.01
NOx	1.29	0	1.29	30.96	5.65	1.29	5.65	#VALUE!			2.37	2.37
VOC	0.07	0	0.07	1.70	0.31	0.07	0.31	#VALUE!			0.13	0.13
CO	1.08	0	1.08	26.01	4.75	1.08	4.75	#VALUE!			1.99	1.99
HAPs	0.00	0	0.00	0.00	0.00	0.00	0.00	#VALUE!			0.00	0.00

PM10: 326 IAC 6-1-10.1(d): 1.852 lbs/hr; 0.02 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Milled Feed Hopper (89-04-G)
CNTRL DEV: Flex-Kleen DC

MDR (T/hr): 27.5
YEARLY PROD (T/yr): 219,450

STACK ID (DIAM.HEIGHT): 1'; 120'
FLOWRATE (ACFM): 6,000
Ts(°F): 90

			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		1998 Actual Emissions	
SCC NO. 03-02-007-55			POTENTIAL TO EMIT						(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS						
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	1.80	0.99	49.50	1188.00	216.81	0.50	2.17	0.010			197.51	1.98
PM10	1.80	0.99	49.50	1188.00	216.81	0.50	2.17	0.010	0.50	2.19	197.51	1.98
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A			0.00	0.00

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.5 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Utility Area

P7:S1: Boiler #1 (10-01-U)

(Natural Gas Combustion)

CNTRL DEV: NONE

Installed: 1960

MDC (mmBtu/hr): 96
MDR (mmctf/hr): 0.0914

HEAT CONTENT (Btu/cft): 1,050
QTY BURNED (mmctf/yr): 18

STACK ID (DIAM:HEIGHT): 4';65"
FLOWRATE (ACFM): 33410
Ts(°F): 350

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	SCC NO. 1-02-006-02			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	EF(lbs/mmctf)	CE (%)	(TPY)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	13.7	0	5.4863	1.2526	30.0617	5.4863	1.2526	5.4863	0.0067	1.9	8.2	0.1233	0.1233
PM10	13.7	0	5.4863	1.2526	30.0617	5.4863	1.2526	5.4863	0.0067	0.288	1.2614	0.1233	0.1233
SOx	0.6	0	0.2403	0.0549	1.3166	0.2403	0.0549	0.2403	N/A			0.0054	0.0054
NOx	140	0	56.0640	12.8000	307.2000	56.0640	12.8000	56.0640	N/A			1.2600	1.2600
VOC	5.8	0	2.3227	0.5303	12.7269	2.3227	0.5303	2.3227	N/A			0.0522	0.0522
CO	35	0	14.0160	3.2000	76.8000	14.0160	3.2000	14.0160	N/A			0.3150	0.3150
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

PM: 326 IAC 6-1-2(b)(5): 0.01 gr/dscf

PM10: 326 IAC 6-1-10.1(h)(3): 0.003 lbs/MMBtu; 0.288 lbs/hr

P7:S2: Boiler #2 (10-02-U)

(Natural Gas Combustion)

CNTRL DEV: NONE

Installed: 1966

MDC (mmBtu/hr): 160
MDR (mmctf/hr): 0.1524

HEAT CONTENT (Btu/cft): 1,050
QTY BURNED (mmctf/yr): 481

STACK ID (DIAM:HEIGHT): 5';56"
FLOWRATE (ACFM): 55700
Ts(°F): 350

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	SCC NO. 1-02-006-01			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	EF(lbs/mmctf)	CE (%)	(TPY)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	13.3	0	8.8768	2.0267	48.6400	8.8768	2.0267	8.8768	0.0065	3.1	13.7	3.1987	3.1987
PM10	13.3	0	8.8768	2.0267	48.6400	8.8768	2.0267	8.8768	0.0065	0.468	2.0498	3.1987	3.1987
SOx	0.6	0	0.4005	0.0914	2.1943	0.4005	0.0914	0.4005	N/A			0.1443	0.1443
NOx	280	0	186.8800	42.6667	1,024.0000	186.8800	42.6667	186.8800	N/A			67.3400	67.3400
VOC	5.5	0	3.6709	0.8381	20.1143	3.6709	0.8381	3.6709	N/A			1.3228	1.3228
CO	84	0	56.0640	12.8000	307.2000	56.0640	12.8000	56.0640	N/A			20.2020	20.2020
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

PM: 326 IAC 6-1-2(b)(5): 0.01 gr/dscf

PM10: 326 IAC 6-1-10.1(h)(3): 0.003 lbs/MMBtu; 0.468 lbs/hr

P7:S3: Boiler #6 (10-03-U)

(Natural Gas Combustion)

CNTRL DEV: NONE

Installed: 1956

MDC (mmBtu/hr): 200
MDR (mmctf/hr): 0.1905

HEAT CONTENT (Btu/cft): 1,050
QTY BURNED (mmctf/yr): 962

STACK ID (DIAM:HEIGHT): 6';165"
FLOWRATE (ACFM): 111457
Ts(°F): 350

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	SCC NO. 1-02-006-01			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	EF(lbs/mmctf)	CE (%)	(TPY)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	13.3	0	11.0960	2.5333	60.8000	11.0960	2.5333	11.0960	0.0041	6.3	27.4	6.3973	6.3973
PM10	13.3	0	11.0960	2.5333	60.8000	11.0960	2.5333	11.0960	0.0041	30.3	132.7	6.3973	6.3973
SOx	0.6	0	0.5006	0.1143	2.7429	0.5006	0.1143	0.5006	N/A	414.00	1,813.32	0.2886	0.2886
NOx	280	0	233.6000	53.3333	1,280.0000	233.6000	53.3333	233.6000	N/A			134.6800	134.6800
VOC	5.5	0	4.5886	1.0476	25.1429	4.5886	1.0476	4.5886	N/A			2.6455	2.6455
CO	84	0	70.0800	16.0000	384.0000	70.0800	16.0000	70.0800	N/A			40.4040	40.4040
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

PM: 326 IAC 6-1-2(b)(5): 0.01 gr/dscf

PM10: 326 IAC 6-1-10.1(d): 30.3 lbs/hr for stack serving boilers 6 & 7

SO2: 326 IAC 7-4-1.1: 2.07 lbs/MMBtu; 784 lbs/hr for stack serving boilers 6, 7, 8, & 10

P7:S3A: Boiler #6 (10-03-U)

(No. 6 Fuel Oil Combustion)

CNTRL DEV: NONE

Installed: 1956

MDC (mmBtu/hr): 200
MDR (mgal/hr): 1.3333
QTY BURNED (mgal/yr): 0

HEAT CONTENT (Btu/gal): 150000
ASH CONTENT (%): N/A
SULFUR CONTENT (%): 1.5

STACK ID (DIAM:HEIGHT): 6';165"
FLOWRATE (ACFM): 111457
Ts(°F): 350

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	SCC NO. 1-02-004-01			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	EF(lbs/mgal)	CE (%)	(TPY)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	17	0	99.28	22.67	544.00	99.28	22.67	99.28	0.04	30.00	131.40	0.0000	0.0000
PM10	17	0	99.28	22.67	544.00	99.28	22.67	99.28	0.04	30.3	132.7	0.0000	0.0000
SOx	235.5	0	1,375.32	314.00	7,536.00	1,375.32	314.00	1,375.32	N/A	414.00	1,813.32	0.0000	0.0000
NOx	67	0	391.28	89.33	2,144.00	391.28	89.33	391.28	N/A			0.0000	0.0000
VOC	0.76	0	4.44	1.01	24.32	4.44	1.01	4.44	N/A			0.0000	0.0000
CO	5	0	29.20	6.67	160.00	29.20	6.67	29.20	N/A			0.0000	0.0000
HAPs	0.012	0	0.07	0.02	0.38	0.07	0.02	0.07	N/A			0.0000	0.0000

PM: 326 IAC 6-1-2(b)(4): 0.15 lbs/MMBtu

PM10: 326 IAC 6-1-10.1(d): 30.3 lbs/hr for stack serving boilers 6 & 7

SO2: 326 IAC 7-4-1.1: 2.07 lbs/MMBtu; 784 lbs/hr for stack serving boilers 6, 7, 8, & 10

E.F. from AP-42 using 1.5% Sulfur content

P7:S4: Boiler #7 (10-04-U)
(Natural Gas Combustion)
CNTRL DEV: NONE
Installed: 1944

MDC (mmBtu/hr): 120
MDR (mmctf/yr): 0.1143

HEAT CONTENT (Btu/cft): 1,050
QTY BURNED (mmctf/yr): 387

STACK ID (DIAM/HEIGHT): 6';165'
FLOWRATE (ACFM): 111457
Ts(*F): 350

SCC NO. 1-02-006-01			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(lbs/mmctf)	CE (%)	POTENTIAL TO EMIT			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	13.7	0	1.5657	37.5771	6.8578	1.5657	6.8578	0.0025	6.3	27.4	2.6510	2.6510
PM10	13.7	0	1.5657	37.5771	6.8578	1.5657	6.8578	0.0025	30.3	132.7	2.6510	2.6510
SOx	0.6	0	0.0686	1.6457	0.3003	0.0686	0.3003	N/A	248.40	1,087.99	0.1161	0.1161
NOx	280	0	32.0000	768.0000	140.1600	32.0000	140.1600	N/A			54.1800	54.1800
VOC	5.8	0	0.6629	15.9086	2.9033	0.6629	2.9033	N/A			1.1223	1.1223
CO	84	0	9.6000	230.4000	42.0480	9.6000	42.0480	N/A			16.2540	16.2540
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

PM: 326 IAC 6-1-2(b)(5): 0.01 gr/dscf
PM10: 326 IAC 6-1-10.1(d): 30.3 lbs/hr for stack serving boilers 6 & 7
SO2: 326 IAC 7-4-1.1: 2.07 lbs/MMBtu; 784 lbs/hr for stack serving boilers 6, 7, 8, & 10

P7:S4A: Boiler #7 (10-04-U)
(No. 6 Fuel Oil Combustion)
CNTRL DEV: NONE
Installed: 1944

MDC (mmBtu/hr): 120
MDR (mgal/hr): 0.8000
QTY BURNED (mgal/yr): 277

HEAT CONTENT (Btu/gal): 150000
ASH CONTENT (%): N/A
SULFUR CONTENT (%): 1.3

STACK ID (DIAM/HEIGHT): 6';165'
FLOWRATE (ACFM): 111457
Ts(*F): 350

SCC NO. 1-02-004-01			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(lbs/mgal)	CE (%)	POTENTIAL TO EMIT			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	15.2	0	12.16	291.84	53.26	12.16	53.26	0.02	18.00	78.84	2.1052	2.1052
PM10	15.2	0	12.16	291.84	53.26	12.16	53.26	0.02	30.3	132.7	2.1052	2.1052
SOx	204.1	0	163.28	3,918.72	715.17	163.28	715.17	N/A	248.40	1,087.99	28.2679	28.2679
NOx	67	0	53.60	1,286.40	234.77	53.60	234.77	N/A			9.2795	9.2795
VOC	0.76	0	0.61	14.59	2.66	0.61	2.66	N/A			0.1053	0.1053
CO	5	0	4.00	96.00	17.52	4.00	17.52	N/A			0.6925	0.6925
HAPs	0.012	0	0.01	0.23	0.04	0.01	0.04	N/A			0.0017	0.0017

E.F. from AP-42 using 1.5% Sulfur content

PM: 326 IAC 6-1-2(b)(4): 0.15 lbs/MMBtu
PM10: 326 IAC 6-1-10.1(d): 30.3 lbs/hr for stack serving boilers 6 & 7
SO2: 326 IAC 7-4-1.1: 2.07 lbs/MMBtu; 784 lbs/hr for stack serving boilers 6, 7, 8, & 10

Total: Boilers 6 & 7 (Worst-Case) for compliance verification of PM10 SIP

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)					
PM	34.83	835.84	152.54	34.83	152.54	0.06	30.3	132.7	9.05	9.05
PM10	34.83	835.84	152.54	34.83	152.54	0.06			9.05	9.05
SOx	477.28	11,454.72	2,090.49	477.28	2,090.49	#VALUE!			0.40	0.40
NOx	142.93	3,430.40	626.05	142.93	626.05	#VALUE!			188.86	188.86
VOC	1.71	41.05	7.49	1.71	7.49	#VALUE!			3.77	3.77
CO	1.71	41.05	7.49	1.71	7.49	#VALUE!			56.66	56.66
HAPs	0.03	0.61	0.11	0.03	0.11	#VALUE!			0.00	0.00

PM10: 326 IAC 6-1-10.1(d): 30.3 lbs/hr for stack serving boilers 6 & 7

P7-S5: Boiler #8 (10-05-U)
(Natural Gas Combustion)
CNTRL DEV: NONE
Installed: 1937

MDC (mmBtu/hr): 120
MDR (mmctf/yr): 0.1143

HEAT CONTENT (Btu/cft): 1,050
QTY BURNED (mmctf/yr): 481

STACK ID (DIAM/HEIGHT): 7';188"
FLOWRATE (ACFM): 76430
Ts(°F): 350

SCC NO. 1-02-006-01			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(lbs/mcft)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	13.7	0	1.5657	37.5771	6.8578	1.5657	6.8578	0.0037	4.3	18.8	3.2949	3.2949			
PM10	13.7	0	1.5657	37.5771	6.8578	1.5657	6.8578	0.0037	22.7	99.4	3.2949	3.2949			
SOx	0.6	0	0.0686	1.6457	0.3003	0.0686	0.3003	N/A	248.40	1,087.99	0.1443	0.1443			
NOx	280	0	32.0000	768.0000	140.1600	32.0000	140.1600	N/A			67.3400	67.3400			
VOC	5.8	0	0.6629	15.9086	2.9033	0.6629	2.9033	N/A			1.3949	1.3949			
CO	84	0	9.6000	230.4000	42.0480	9.6000	42.0480	N/A			20.2020	20.2020			
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000			

PM: 326 IAC 6-1-2(b)(5): 0.01 gr/dscf
PM10: 326 IAC 6-1-10.1(d): 22.7 lbs/hr for stack serving boilers 8 & 10
SO2: 326 IAC 7-4-1.1: 2.07 lbs/MMBtu; 784 lbs/hr for stack serving boilers 6, 7, 8, & 10

P7-S5A: Boiler #8(10-05-U)
(No. 6 Fuel Oil Combustion)
CNTRL DEV: NONE
Installed: 1937

MDC (mmBtu/hr): 120
MDR (mgal/hr): 0.8000
QTY BURNED (mgal/yr): 275

HEAT CONTENT (Btu/gal): 150000
ASH CONTENT (%): N/A
SULFUR CONTENT (%): 1.3

STACK ID (DIAM/HEIGHT): 7';188"
FLOWRATE (ACFM): 76430
Ts(°F): 350

SCC NO. 1-02-004-01			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(lbs/mgal)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	15.2	0	12.16	291.84	53.26	12.16	53.26	0.03	18.00	78.84	2.0900	2.0900			
PM10	15.2	0	12.16	291.84	53.26	12.16	53.26	0.03	22.7	99.4	2.0900	2.0900			
SOx	204.1	0	163.28	3,918.72	715.17	163.28	3,918.72	N/A	248.40	1,087.99	28.0638	28.0638			
NOx	67	0	53.60	1,286.40	234.77	53.60	234.77	N/A			9.2125	9.2125			
VOC	0.76	0	0.61	14.59	2.66	0.61	2.66	N/A			0.1045	0.1045			
CO	5	0	4.00	96.00	17.52	4.00	17.52	N/A			0.6875	0.6875			
HAPs	0.012	0	0.01	0.23	0.04	0.01	0.04	N/A			0.0017	0.0017			

E.F. from AP-42 using 1.5% Sulfur content

PM: 326 IAC 6-1-2(b)(4): 0.15 lbs/MMBtu
PM10: 326 IAC 6-1-10.1(d): 22.7 lbs/hr for stack serving boilers 8 & 10
SO2: 326 IAC 7-4-1.1: 2.07 lbs/MMBtu; 784 lbs/hr for stack serving boilers 6, 7, 8, & 10

P7-S6: Boiler #10 (10-06-U)
(Natural Gas Combustion)
CNTRL DEV: NONE
Installed: 1937

MDC (mmBtu/hr): 120
MDR (mmctf/yr): 0.1143

HEAT CONTENT (Btu/cft): 1,050
QTY BURNED (mmctf/yr): 388

STACK ID (DIAM/HEIGHT): 7';188"
FLOWRATE (ACFM): 76430
Ts(°F): 350

SCC NO. 1-02-006-01			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(lbs/mcft)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	13.7	0	1.5657	37.5771	6.8578	1.5657	6.8578	0.0037	4.3	18.8	2.6578	2.6578			
PM10	13.7	0	1.5657	37.5771	6.8578	1.5657	6.8578	0.0037	22.7	99.4	2.6578	2.6578			
SOx	0.6	0	0.0686	1.6457	0.3003	0.0686	0.3003	N/A	248.40	1,087.99	0.1164	0.1164			
NOx	280	0	32.0000	768.0000	140.1600	32.0000	140.1600	N/A			54.3200	54.3200			
VOC	5.8	0	0.6629	15.9086	2.9033	0.6629	2.9033	N/A			1.1252	1.1252			
CO	84	0	9.6000	230.4000	42.0480	9.6000	42.0480	N/A			16.2960	16.2960			
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000			

PM: 326 IAC 6-1-2(b)(5): 0.01 gr/dscf
PM10: 326 IAC 6-1-10.1(d): 22.7 lbs/hr for stack serving boilers 8 & 10
SO2: 326 IAC 7-4-1.1: 2.07 lbs/MMBtu; 784 lbs/hr for stack serving boilers 6, 7, 8, & 10

P7-S6A: Boiler #10 (10-06-U)
(No. 6 Fuel Oil Combustion)
CNTRL DEV: NONE
Installed: 1937

MDC (mmBtu/hr): 120
MDR (mgal/hr): 0.8000
QTY BURNED (mgal/yr): 0

HEAT CONTENT (Btu/gal): 150000
ASH CONTENT (%): N/A
SULFUR CONTENT (%): 2

STACK ID (DIAM/HEIGHT): 7';188"
FLOWRATE (ACFM): 76430
Ts(°F): 350

SCC NO. 1-02-004-01			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(lbs/mgal)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS			
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	17	0	13.60	326.40	59.57	13.60	59.57	0.03	18.00	78.84	0.0000	0.0000			
PM10	17	0	13.60	326.40	59.57	13.60	59.57	0.03	22.7	99.4	0.0000	0.0000			
SOx	235.5	0	188.40	4,521.60	825.19	188.40	4,521.60	N/A	248.40	1,087.99	0.0000	0.0000			
NOx	67	0	53.60	1,286.40	234.77	53.60	234.77	N/A			0.0000	0.0000			
VOC	0.76	0	0.61	14.59	2.66	0.61	2.66	N/A			0.0000	0.0000			
CO	5	0	4.00	96.00	17.52	4.00	17.52	N/A			0.0000	0.0000			
HAPs	0.012	0	0.01	0.23	0.04	0.01	0.04	N/A			0.0000	0.0000			

E.F. from AP-42 using 1.5% Sulfur content

PM: 326 IAC 6-1-2(b)(4): 0.15 lbs/MMBtu
PM10: 326 IAC 6-1-10.1(d): 22.7 lbs/hr for stack serving boilers 8 & 10
SO2: 326 IAC 7-4-1.1: 2.07 lbs/MMBtu; 784 lbs/hr for stack serving boilers 6, 7, 8, & 10

Total: Boilers 8 & 10 (Worst-Case) for compliance verification of PM10 SIP

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	25.76	618.24	112.83	25.76	112.83	0.06	22.7	99.4	5.95	5.95
PM10	25.76	618.24	112.83	25.76	112.83	0.06			5.95	5.95
SOx	351.68	8,440.32	1,540.36	351.68	1,540.36	#VALUE!			0.26	0.26
NOx	107.20	2,572.80	469.54	107.20	469.54	#VALUE!			121.66	121.66
VOC	1.33	31.82	5.81	1.33	5.81	#VALUE!			2.52	2.52
CO	1.33	31.82	5.81	1.33	5.81	#VALUE!			36.50	36.50
HAPs	0.02	0.46	0.08	0.02	0.08	#VALUE!			0.00	0.00

PM10: 326 IAC 6-1-10.1(d): 22.7 lbs/hr for stack serving boilers 8 & 10

Total: Boilers 6, 7, 8, & 10 (Worst-Case) for compliance verification of SO2 SIP

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	60.59	1,454.08	265.37	60.59	265.37	0.12	784	3,434	15.00	15.00
PM10	60.59	1,454.08	265.37	60.59	265.37	0.12			15.00	15.00
SOx	828.96	19,895.04	3,630.84	828.96	3,630.84	#VALUE!			0.67	0.67
NOx	250.13	6,003.20	1,095.58	250.13	1,095.58	#VALUE!			310.52	310.52
VOC	3.04	72.87	13.30	3.04	13.30	#VALUE!			6.29	6.29
CO	3.04	72.87	13.30	3.04	13.30	#VALUE!			93.16	93.16
HAPs	0.04	1.08	0.20	0.04	0.20	#VALUE!			0.00	0.00

SO2: 326 IAC 7-4-1.1: 2.07 lbs/MMBtu; 784 lbs/hr for stack serving boilers 6, 7, 8, & 10

Total: Utility Area - Natural Gas

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	10.51	252.23	46	10.51	46	0.03	26.07	114.20	18	18
PM10	10.51	252.23	46	10.51	46	0.03	53.76	235.45	18	18
SOx	0.47	11.19	2	0.47	2	#VALUE!	784	3,434	1	1
NOx	204.80	4,915.20	897	204.80	897	#VALUE!	0.00	0.00	379	379
VOC	4.40	105.71	19	4.40	19	#VALUE!	0.00	0.00	8	8
CO	60.80	1,459.20	266	60.80	266	#VALUE!	0.00	0.00	114	114
HAPs	0.00	0.00	0	0.00	0	#VALUE!	0.00	0.00	0	0

Total: Utility Area - Fuel Oil

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	63.87	1,532.78	280	63.87	280	0.13	89.00	389.81	8	8
PM10	63.87	1,532.78	280	63.87	280	0.13	53.76	235.45	8	8
SOx	829.11	19,898.55	3,631	829.11	3,631	#VALUE!	784	3,434	56	56
NOx	305.60	7,334.40	1,339	305.60	1,339	#VALUE!	0.00	0.00	87	87
VOC	4.21	100.94	18	4.21	18	#VALUE!	0.00	0.00	2	2
CO	34.67	832.00	152	34.67	152	#VALUE!	0.00	0.00	22	22
HAPs	0.04	1.08	0.20	0.04	0.20	#VALUE!	0.00	0.00	0.00	0.00

Refinery Area

P4:S1: Bulk Carbon/Filter Aid System
(17-03-R)
CNTRL DEV: None

MDR (T/hr): 17.5
YEARLY PROD (T/yr): 153,300

STACK ID (DIAM:HEIGHT): 1'; 95'
FLOWRATE (ACFM): 745
Ts(°F): 100

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.35	0.99	6.044	145.047	26.471	0.060	0.265	0.010	0.2	0.7941	26.4711	0.2647
PM10	0.35	0.99	6.044	145.047	26.471	0.060	0.265	0.010	0.06	0.3	26.4711	0.2647
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.06 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 6 inches of water

P4:S2: #2 Corn Syrup Solids Manufacturing
(18-03-R)
CNTRL DEV: Dust Collector

MDR (T/hr): 2.7
YEARLY PROD (T/yr): 23652

STACK ID (DIAM:HEIGHT): 1'; 30'
FLOWRATE (ACFM): 3670
Ts(°F): 105

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	10.93	0.99	29.508	708.203	129.247	0.295	1.292	0.010	0.9	3.877	129.247	1.292
PM10	10.93	0.99	29.508	708.203	129.247	0.295	1.292	0.010	0.30	1.31	129.247	1.292
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.30 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 6 inches of water

P4:S3: #4 Corn Syrup Spray Dryer
(100-03-R)
CNTRL DEV: Dust Collector

MDR (T/hr): 4.8
YEARLY PROD (T/yr): 42048

STACK ID (DIAM:HEIGHT): 8'; 90'
FLOWRATE (ACFM): 50000
Ts(°F): 110

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	83.02	0.99	398.50	9,563.9	1,745.41	3.985	17.454	0.010	12.0	52.362	1,745.414	17.454
PM10	83.02	0.99	398.50	9,563.9	1,745.41	3.985	17.454	0.010	4.2	18.4	1,745.414	17.454
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 4.2 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Stack Testing required for PM10

Corn Syrup Spray Dryer/Cooler System #3
(100-01-R-P)
CNTRL DEV: Wet Venturi Scrubber

MDR (T/hr): 3.849
YEARLY PROD (T/yr):

STACK ID (DIAM:HEIGHT): 8.6'; 100'
FLOWRATE (ACFM): 42187
Ts(°F): 120

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	85.85	0.99	330.43	7,930.3	1,447.28	3.304	14.473	0.010	9.9	43.419	0.0000	0.0000
PM10	85.85	0.99	330.43	7,930.3	1,447.28	3.304	14.473	0.010	2.71	11.870	0.0000	0.0000
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 4.96 lbs/hr; 0.015 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Stack Testing required for PM10

P4;S5: Activated Carbon Regeneration Furnace #2
(104-01-R)
CNTRL DEV: Scrubber

MDR (T/hr): 1.146
YEARLY PROD (T/yr): 10038.96

STACK ID (DIAM:HEIGHT): 2';110'
FLOWRATE (ACFM): 6622
Ts(°F): 160

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	SCC NO.	EF(LB/T)	CE (%)	POTENTIAL TO EMIT					
				BEFORE CONTROLS			AFTER CONTROLS		
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	03-02-007-54	31.75	0.98	36.390	873.372	159.390	0.728	3.188	0.015
PM10		31.75	0.98	36.390	873.372	159.390	0.728	3.188	0.015
SOx		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
NOx		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
VOC		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
CO		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
HAPs		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

1998 Actual Emissions	
BEFORE CONTROLS	AFTER CONTROLS
159.390	3.188
159.390	3.188
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.015 gr/dscf grain loading
Actual Emissions based on 0.015 gr/dscf, and 8760 hrs/yr (company submittal)

P4;S5A: Activated Carbon Regeneration Furnace #2
In-Process Fuel Combustion
(104-01-R)
CNTRL DEV: NONE

MDC (mmBtu/hr): 13.2
MDR (mmctf/yr): 0.0126

HEAT CONTENT (Btu/cft): 1050
QTY BURNED (mmctf/yr): 43.40

STACK ID (DIAM:HEIGHT): 2';110'
FLOWRATE (ACFM): 6622
Ts(°F): 160

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	SCC NO.	EF(lbs/mmctf)	CE (%)	POTENTIAL TO EMIT					
				BEFORE CONTROLS			AFTER CONTROLS		
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	03-02-007-54	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PM10		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SOx		0.6	0	0.0075	0.1810	0.0330	0.0075	0.0330	N/A
NOx		140	0	1.7600	42.2400	7.7088	1.7600	7.7088	N/A
VOC		2.8	0	0.0352	0.8448	0.1542	0.0352	0.1542	N/A
CO		35	0	0.4400	10.5600	1.9272	0.4400	1.9272	N/A
HAPs		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

1998 Actual Emissions	
BEFORE CONTROLS	AFTER CONTROLS
0.0000	0.0000
0.0000	0.0000
0.0130	0.0130
3.0380	3.0380
0.0608	0.0608
0.7595	0.7595
0.0000	0.0000

E.F. based on AP-42

Emissions based on company's submittal of 8760 hours/year

Total: P4;S5: Activated Carbon Regeneration Furnace #2

POLLUTANT	POTENTIAL TO EMIT					ALLOWABLE		1998 Actual Emissions		
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	36.3905	873.3716	159.3903	0.7278	3.1878	0.0150	1.5	6.376	159.3903	3.1878
PM10	36.3905	873.3716	159.3903	0.7278	3.1878	0.0150	0.728	3.189	159.3903	3.1878
SOx	0.0075	0.1810	0.0330	0.0075	0.0330	#VALUE!			0.0130	0.0130
NOx	1.7600	42.2400	7.7088	1.7600	7.7088	#VALUE!			3.0380	3.0380
VOC	0.0352	0.8448	0.1542	0.0352	0.1542	#VALUE!			0.0608	0.0608
CO	0.4400	10.5600	1.9272	0.4400	1.9272	#VALUE!			0.7595	0.7595
HAPs	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!			0.0000	0.0000

PM10: 326 IAC 6-1-10.1(d): 0.728 lbs/hr; 0.015 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P4; S6: Soda Ash Tank
(104-02-R)
CNTRL DEV: Venturi Scrubber

MDR (T/hr): 15
YEARLY PROD (T/yr): 1650

STACK ID (DIAM:HEIGHT): 1';70'
FLOWRATE (ACFM): 1000
Ts(°F): 130

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	SCC NO.	EF(LB/T)	CE (%)	POTENTIAL TO EMIT					
				BEFORE CONTROLS			AFTER CONTROLS		
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	103	1.03	0.99	15.400	369.588	67.450	0.154	0.674	0.020
PM10		1.03	0.99	15.400	369.588	67.450	0.154	0.674	0.020
SOx		0	0	0.000	0.000	0.000	0.000	0.000	N/A
NOx		0	0	0.000	0.000	0.000	0.000	0.000	N/A
VOC		0	0	0.000	0.000	0.000	0.000	0.000	N/A
CO		0	0	0.000	0.000	0.000	0.000	0.000	N/A
HAPs		0	0	0.000	0.000	0.000	0.000	0.000	N/A

1998 Actual Emissions	
BEFORE CONTROLS	AFTER CONTROLS
0.847	0.008
0.847	0.008
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.154 lbs/hr; 0.02 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P4:S8: Filter Aid Hopper
(104-03-R)

MDR (T/hr): 0.75
YEARLY PROD (T/yr): 6570

STACK ID (DIAM:HEIGHT): 1',40"
FLOWRATE (ACFM): 250
Ts(°F): 60

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	5.82	0.99	4.368	104.835	19.132	0.044	0.191	0.020	0.1	0.287	19.132	0.191
PM10	5.82	0.99	4.368	104.835	19.132	0.044	0.191	0.020	0.044	0.193	19.132	0.191
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.044 lbs/hr; 0.02 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 6 inches of water

P4:S9: Sodium Bisulfate Bag Dump
(104-05-R)

MDR (T/hr): 0.7
YEARLY PROD (T/yr): 6132

STACK ID (DIAM:HEIGHT): 1',40"
FLOWRATE (ACFM): 460
Ts(°F): 60

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	11.48	0.99	8.0374	192.8967	35.2036	0.0804	0.3520	0.0200	0.1	0.5281	35.2036	0.3520
PM10	11.48	0.99	8.0374	192.8967	35.2036	0.0804	0.3520	0.0200	0.080	0.3504	35.2036	0.3520
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.080 lbs/hr; 0.02 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 6 inches of water

Unit ID 15-06-R

Building 15 HCl Emissions (Indoor)

MDR (T/hr): 0.0003
YEARLY PURCHASE (T/yr): 7.277
(All Toluene Emissions)

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

CNTRL DEV: None

Vent through general building ventilation

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.000
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.000
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	2000	0	0.6000	14.4000	2.6280	0.6000	2.6280	N/A			7.2770	7.2770
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAP	2000	0	0.6000	14.4000	2.6280	0.6000	2.6280	N/A			7.2770	7.2770

Emissions based on SOCFI factors

HAP: Hydrogen chloride

Unit ID 15-07-F

Building 15 HCl Emissions (Outdoor)

MDR (T/hr): 0.00015
YEARLY PURCHASE (T/yr): 0.000

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.000
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.000
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	2000	0	0.3000	7.2000	1.3140	0.3000	1.3140	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAP	2000	0	0.3000	7.2000	1.3140	0.3000	1.3140	N/A			0.0000	0.0000

Emissions based on SOCFI factors

HAP: Hydrogen chloride

Total: Stack Emissions - Refinery Area

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	828.674	19,888.177	3,630	8.651	38	0.115	24.807	108.655	2,116	23
PM10	828.674	19,888.177	3,630	8.651	38	0.115	8.276	36.249	2,116	23
SOx	0.008	0.181	0	0.008	0	#VALUE!	0.000	0.000	0	0
NOx	1.760	42.240	8	1.760	8	#VALUE!	0.000	0.000	3	3
VOC	0.035	0.845	0	0.035	0	#VALUE!	0.000	0.000	0	0
CO	0.440	10.560	2	0.440	2	#VALUE!	0.000	0.000	1	1
HAPs	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0

HAPs: None

Total: Fugitive Emissions - Refinery Area

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
PM10	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
SOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
NOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
VOC	0.900	21.600	4	0.900	3.9	#VALUE!	0.000	0.000	7	7
CO	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
HAPs	0.900	21.600	4	0.900	3.9	#VALUE!	0.000	0.000	7	7

HAPs: HCl

Starch Production Area

P.G. Starch Drying and Bagging System

Unit ID #93-18-S
Roll Dryers 101, 102, & 103: only steam expected.
CNTRL DEV: Packaging Dust Collector

MDR (T/hr): 3
YEARLY PROD (T/yr): 26280

STACK ID (DIAM:HEIGHT): (1.2: 60)
FLOWRATE (ACFM): 4000
Ts(°F): 70

SCC NO. 03-02-014-01			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROL			(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	BEFORE	AFTER
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)						CONTROLS	CONTROLS
PM	11.43	0.99	34.29	822.86	150.17	0.343	1.502	0.010	0.343	1.50	0.010	0.343	1.50	150.1714	1.5017
PM10	11.43	0.99	34.29	822.86	150.17	0.343	1.502	0.010	0.343	1.50	0.010	0.343	1.50	150.1714	1.5017
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0.000	0.000	N/A	0.000	0.000	0.0000	0.0000
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0.000	0.000	N/A	0.000	0.000	0.0000	0.0000
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0.000	0.000	N/A	0.000	0.000	0.0000	0.0000
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0.000	0.000	N/A	0.000	0.000	0.0000	0.0000
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A	0.000	0.000	N/A	0.000	0.000	0.0000	0.0000

EF backcalculated using provider's guarantee to company of 0.01 gr/dscf grain loading.
Allowable based on Company's submission of 0.01 gr/dscf as max emissions in application reviewed by this Department.

326 IAC 6-1-2 (h)
as referenced by the
Hammond Air Quality Control
Ordinance #7102

7/8/99: P.G. Starch Drying and Bagging Mods Review: Added this unit and eliminated:

- (1) P.G. Starch Manufacturing System #1 (18-06-S) (Dryers 1, 2, and 3)
- (2) P.G. Starch Manufacturing System #2 (18-07-S) (Dryer 4, sometimes 3)
- (3) P.G. Starch Manufacturing System #3C (18-08-S) (milling)
- (4) P.G. Starch Manufacturing System #3D (18-09-S) (production)
- (5) P.G. Starch Manufacturing System #4 (85-01-S) (milling)

P5;S5: Batch Scale Hopper #1 (34-01-S)

CNTRL DEV: Dust Collector

MDR (T/hr): 24
YEARLY PROD (T/yr): 210240

STACK ID (DIAM:HEIGHT): 1';70"
FLOWRATE (ACFM): 550
Ts(°F): 100

SCC NO. 03-02-014-01			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	BEFORE	AFTER
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)						CONTROLS	CONTROLS
PM	0.19	0.99	4.4617	107.0816	19.5424	0.0446	0.1954	0.0100	0.1	0.5863	0.0100	0.04	0.1752	19.5424	0.1954
PM10	0.19	0.99	4.4617	107.0816	19.5424	0.0446	0.1954	0.0100	0.04	0.1752	0.0100	0.04	0.1752	19.5424	0.1954
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.000	0.0000	N/A	0.000	0.0000	0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.000	0.0000	N/A	0.000	0.0000	0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.000	0.0000	N/A	0.000	0.0000	0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.000	0.0000	N/A	0.000	0.0000	0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.000	0.0000	N/A	0.000	0.0000	0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.04 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 5 inches of water

P5;S6: Dextrin Starch Reactor #1 (34-02-S)

CNTRL DEV: Dust Collector

MDR (T/hr): 6
YEARLY PROD (T/yr): 52560

STACK ID (DIAM:HEIGHT): 1';40"
FLOWRATE (ACFM): 2600
Ts(°F): 200

SCC NO.			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	BEFORE	AFTER
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)						CONTROLS	CONTROLS
PM	2.98	0.99	17.896	429.506	78.385	0.179	0.784	0.010	0.5	2.3515	0.010	0.180	0.788	78.385	0.784
PM10	2.98	0.99	17.896	429.506	78.385	0.179	0.784	0.010	0.180	0.788	0.010	0.180	0.788	78.385	0.784
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A	0.000	0.000	N/A	0.000	0.000	0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A	0.000	0.000	N/A	0.000	0.000	0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A	0.000	0.000	N/A	0.000	0.000	0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A	0.000	0.000	N/A	0.000	0.000	0.000	0.000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.000	0.0000	N/A	0.000	0.0000	0.000	0.000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.180 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 2 - 4 inches of water

P5;S7: Dextrin Starch Cooler #1 (34-03-S)

CNTRL DEV: Dust Collector

MDR (T/hr): 6
YEARLY PROD (T/yr): 52560

STACK ID (DIAM:HEIGHT): 1';25"
FLOWRATE (ACFM): 550
Ts(°F): 130

SCC NO. 03-01-014-01			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	BEFORE	AFTER
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)						CONTROLS	CONTROLS
PM	0.71	0.99	4.235	101.637	18.549	0.042	0.185	0.010	0.1	0.5565	0.010	0.042	0.184	18.549	0.185
PM10	0.71	0.99	4.235	101.637	18.549	0.042	0.185	0.010	0.042	0.184	0.010	0.042	0.184	18.549	0.185
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A	0.000	0.000	N/A	0.000	0.000	0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A	0.000	0.000	N/A	0.000	0.000	0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A	0.000	0.000	N/A	0.000	0.000	0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A	0.000	0.000	N/A	0.000	0.000	0.000	0.000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.000	0.0000	N/A	0.000	0.0000	0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.042 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 2 - 4 inches of water

P5:S8: Surge Hopper #1
(34-05-S)

MDR (T/hr): 6
YEARLY PROD (T/yr): 52560

STACK ID (DIAM:HEIGHT): 1',85'
FLOWRATE (ACFM): 1400
Ts(°F): 100

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	1.89	0.99	11.357	272.571	49.744	0.114	0.497	0.010	0.3	1.4923	49.744	0.497
PM10	1.89	0.99	11.357	272.571	49.744	0.114	0.497	0.010	0.11	0.48	49.744	0.497
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.11 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P5:S9: Dextrin Feed Hoppers #1 & 2
(34-06-S & 34-07-S)

MDR (T/hr): 6
YEARLY PROD (T/yr): 52560

STACK ID (DIAM:HEIGHT): 1',70'
FLOWRATE (ACFM): 220
Ts(°F): 100

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.30	0.99	1.785	42.833	7.817	0.018	0.078	0.010	0.1	0.2345	7.817	0.078
PM10	0.30	0.99	1.785	42.833	7.817	0.018	0.078	0.010	0.030	0.131	7.817	0.078
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.030 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Special Condition: Only one system can be running at a time

P5:S10: Batch Scale Hopper #2
(34B-13-S)

MDR (T/hr): 24
YEARLY PROD (T/yr): 210240

STACK ID (DIAM:HEIGHT): 1',70'
FLOWRATE (ACFM): 900
Ts(°F): 150

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.28	0.99	6.703	160.862	29.357	0.067	0.294	0.010	0.2	0.8807	29.357	0.294
PM10	0.28	0.99	6.703	160.862	29.357	0.067	0.294	0.010	0.067	0.293	29.357	0.294
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.000	0.000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.067 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 5 inches of water

P5:S11: Dextrin Starch Cooler #2
(34B-01-S)

MDR (T/hr): 6
YEARLY PROD (T/yr): 52560

STACK ID (DIAM:HEIGHT): 1',25'
FLOWRATE (ACFM): 550
Ts(°F): 140

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.69	0.99	4.164	99.943	18.240	0.042	0.182	0.010	0.1	0.5472	18.240	0.182
PM10	0.69	0.99	4.164	99.943	18.240	0.042	0.182	0.010	0.042	0.184	18.240	0.182
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.042 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 5 inches of water

P5:S12: Surge Hopper #2
(34B-03-S)
CNTRL DEV: Bag Filter

MDR (T/hr): 6
YEARLY PROD (T/yr): 52560

STACK ID (DIAM:HEIGHT): 1',40"
FLOWRATE (ACFM): 1400
Ts(°F): 100

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	1.89	0.99	11.3571	272.5714	49.7443	0.1136	0.4974	0.0100	0.3	1.4923	49.7443	0.4974
PM10	1.89	0.99	11.3571	272.5714	49.7443	0.1136	0.4974	0.0100	0.114	0.499	49.7443	0.4974
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.114 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 5 inches of water

P5:S13: Dextrin Starch Reactor #2
(34B-04-S)
CNTRL DEV: Dust Collector

MDR (T/hr): 6
YEARLY PROD (T/yr): 52560

STACK ID (DIAM:HEIGHT): 1',40"
FLOWRATE (ACFM): 2600
Ts(°F): 200

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	2.98	0.99	17.896	429.506	78.385	0.179	0.784	0.010	0.5	2.3515	78.385	0.784
PM10	2.98	0.99	17.896	429.506	78.385	0.179	0.784	0.010	0.179	0.784	78.385	0.784
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.179 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 15 inches of water

P5:S14: Dextrin Feed Hoppers: 3 and 4 (System2)
(34B-05-S and 34B-06-S)
CNTRL DEV: Dust Collector

MDR (T/hr): 6
YEARLY PROD (T/yr): 52560

STACK ID (DIAM:HEIGHT): 1',8"
FLOWRATE (ACFM): 440
Ts(°F): 200

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 3-02-014-01			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.50	0.99	3.029	72.686	13.265	0.030	0.133	0.010	0.1	0.3980	13.265	0.133
PM10	0.50	0.99	3.029	72.686	13.265	0.030	0.133	0.010	0.030	0.131	13.265	0.133
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.030 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P5:S15: Dextrin Bulk Loading
(48-09-S)
CNTRL DEV: Dust Collector

MDR (T/hr): 30
YEARLY PROD (T/yr): 262800

STACK ID (DIAM:HEIGHT): 1',28"
FLOWRATE (ACFM): 3000
Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.86	0.99	25.714	617.143	112.629	0.257	1.126	0.010	0.8	3.3789	112.629	1.126
PM10	0.86	0.99	25.714	617.143	112.629	0.257	1.126	0.010	0.26	1.139	112.629	1.126
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.26 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 10 inches of water

P5:S16: Lime Bulk Loading
(52-01-S)
CNTRL DEV: Dust Collector

MDR (T/hr): 1.25
YEARLY PROD (T/yr): 10950

STACK ID (DIAM:HEIGHT):
FLOWRATE (ACFM): 300
Ts(°F): 68

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	2.06	0.99	2.5812	61.9481	11.3055	0.0258	0.1131	0.0100	0.1	0.3392	11.3055	0.1131
PM10	2.06	0.99	2.5812	61.9481	11.3055	0.0258	0.1131	0.0100			11.3055	0.1131
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P5:S20: Starch Milling Systems: 1&2
(59-01-S and 59-02-S)
CNTRL DEV: Dust Collector

MDR (T/hr): 15
YEARLY PROD (T/yr): 131400

STACK ID (DIAM:HEIGHT): 2';60'
FLOWRATE (ACFM): 10000
Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	5.71	0.99	85.71	2,057.14	375.43	0.857	3.754	0.010	2.6	11.2629	375.429	3.754
PM10	5.71	0.99	85.71	2,057.14	375.43	0.857	3.754	0.010			0.86	3.767
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.000	0.000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.43 lbs/hr, 0.01 gr/dscf (each)
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P5:S21: Starch Ring Dryer #2
(59-03-S)
CNTRL DEV: Wet Scrubber

MDR (T/hr): 13.5
YEARLY PROD (T/yr): 117980

STACK ID (DIAM:HEIGHT): 6';60"
FLOWRATE (ACFM): 78707
Ts(*F): 104

SCC NO. 03-02-007-54			PERMITTED OPERATING HRS: 8760 hr/yr					
			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	26	0.99	350.17	8,404.03	1,533.74	3.502	15.337	0.006
PM10	26	0.99	350.17	8,404.03	1,533.74	3.502	15.337	0.006
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

1998 Actual Emissions	
BEFORE CONTROLS	AFTER CONTROLS
1,533.736	15.337
1,533.736	15.337
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000

EF: back calculated using manufacturer's specifications of 0.006 gr/dscf grain loading
Actual Emissions based on 0.006 gr/dscf, and 8760 hrs/yr (company submittal)

P5:S21A: Starch Ring Dryer#2 (59-03-S)
In-Process Fuel Combustion

MDC (mmBtu/hr): 25
MDR (mmctf/yr): 0.0238

HEAT CONTENT (Btu/cft): 1050
QTY BURNED (mmctf/yr): 99.00

STACK ID (DIAM:HEIGHT): 6';60"
FLOWRATE (ACFM): 78707
Ts(*F): 104

SCC NO. 03-02-007-54			PERMITTED OPERATING HRS: 8760 hr/yr					
			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(lbs/mmctf)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SOx	0.6	0	0.0143	0.3429	0.0626	0.0143	0.0626	N/A
NOx	34.65	0	0.8250	19.8000	3.6135	0.8250	3.6135	N/A
VOC	2.8	0	0.0667	1.6000	0.2920	0.0667	0.2920	N/A
CO	35	0	0.8333	20.0000	3.6500	0.8333	3.6500	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

1998 Actual Emissions	
BEFORE CONTROLS	AFTER CONTROLS
0.0000	0.0000
0.0000	0.0000
0.0297	0.0297
1.7152	1.7152
0.1386	0.1386
1.7325	1.7325
0.0000	0.0000

E.F. based on AP-42

Emissions based on company's submittal of 8760 hours/year

Total: Starch Ring Dryer #2 (59-03-S)

SCC NO. 03-02-007-54			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		1998 Actual Emissions	
			POTENTIAL TO EMIT						(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			BEFORE CONTROLS			AFTER CONTROLS						
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS		
PM	350.1680	8,404.0320	1,533.7358	3.5017	15.3374	0.0055	19.0	83.3026	1,533.7358	15.3374		
PM10	350.1680	8,404.0320	1,533.7358	3.5017	15.3374	0.0055	3.50	15.330	1,533.7358	15.3374		
SOx	0.0143	0.3429	0.0626	0.0143	0.0626	#VALUE!			0.0297	0.0297		
NOx	0.8250	19.8000	3.6135	0.8250	3.6135	#VALUE!			1.7152	1.7152		
VOC	0.0667	1.6000	0.2920	0.0667	0.2920	#VALUE!			0.1386	0.1386		
CO	0.8333	20.0000	3.6500	0.8333	3.6500	#VALUE!			1.7325	1.7325		
HAPs	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!			0.0000	0.0000		

PM10: 326 IAC 6-1-10.1(d): 3.50 lbs/hr, 0.006 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Stack Testing required for PM10

P5:S22: Starch Bulk Loading (Receiver)
(76-02-S)
CNTRL DEV: Dust Collector

MDR (T/hr): 30
YEARLY PROD (T/yr): 262800

STACK ID (DIAM:HEIGHT): 1';19"
FLOWRATE (ACFM): 2000
Ts(*F): 70

SCC NO. 03-02-007-55			PERMITTED OPERATING HRS: 8760 hr/yr					
			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.57	0.99	17.143	411.429	75.086	0.171	0.751	0.010
PM10	0.57	0.99	17.143	411.429	75.086	0.171	0.751	0.010
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A

1998 Actual Emissions	
BEFORE CONTROLS	AFTER CONTROLS
75.086	0.751
75.086	0.751
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.17 lbs/hr, 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 4 inches of water

P5:S23: Starch Bulk Loading (Railcar)
(76-03-S)

MDR (T/hr): 24
YEARLY PROD (T/yr): 210240

STACK ID (DIAM:HEIGHT): 1';19'
FLOWRATE (ACFM): 2000
Ts(°F): 70

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: **8760** hr/yr

SCC NO. 4-02-013-01			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.71	0.99	17.143	411.429	75.086	0.171	0.751	0.010	0.5	2.2526	75.086	0.751
PM10	0.71	0.99	17.143	411.429	75.086	0.171	0.751	0.010	0.17	0.745	75.086	0.751
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.17 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P5:S24: Corn Starch Storage Bins #20-36
(120-01-S thru 120-17-S)

MDR (T/hr): 75
YEARLY PROD (T/yr): 657000

STACK ID (DIAM:HEIGHT): 1';50'
FLOWRATE (ACFM): 7000
Ts(°F): 110

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: **8760** hr/yr

SCC NO. 4-02-013-01			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.74	0.99	55.789	1,338.947	244.358	0.558	2.444	0.010	1.7	7.3307	244.358	2.4436
PM10	0.74	0.99	55.789	1,338.947	244.358	0.558	2.444	0.010	0.56	2.453	244.358	2.4436
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.56 lbs/hr; 0.01 gr/dscf (each)
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Permit limitation: 5 of 17 tanks at a time

dP: 4 inches of water

P5:S25: Starch Ring Dryer #3
(125-01-S)

MDR (T/hr): 26.55
YEARLY PROD (T/yr): 232578

STACK ID (DIAM:HEIGHT): (7.33': 130')
FLOWRATE (ACFM): 83140

CNTRL DEV: Entoleter Wet Vortex Scrubber

Ts(°F): 111

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	5.42	0.977	143.795	3,451.091	629.824	3.307	14.486	0.005
PM10	5.42	0.977	143.795	3,451.091	629.824	3.307	14.486	0.005
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A

1998 Actual Emissions	
BEFORE CONTROLS	AFTER CONTROLS
629.824	14.4860
629.824	14.4860
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000

EF calculated using alleged scrubber efficiency and Entoleter's guaranteed outlet loading of 0.005 grains at 83140 acfm and 111 °F (max 3.5 lbs/hr) from current application for scrubber replacement.

Scrubber replacement review 5/27/98: eliminated Corn Scale System (140-06-G)

P5:S25A: Starch Ring Dryer #3 (125-01-S)

In-Process Fuel Combustion

MDC (mmBtu/hr): 62
MDR (mmctf/yr): 0.0590

HEAT CONTENT (Btu/cft): 1050
QTY BURNED (mmctf/yr): 204.00

STACK ID (DIAM:HEIGHT): (7.33': 130')
FLOWRATE (ACFM): 83140
Ts(°F): 111

CNTRL DEV: NONE

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(lbs/mmctf)	CE (%)	POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SOx	0.6	0	0.0354	0.8503	0.1552	0.0354	0.1552	N/A
NOx	34.65	0	2.0460	49.1040	8.9615	2.0460	8.9615	N/A
VOC	2.8	0	0.1653	3.9680	0.7242	0.1653	0.7242	N/A
CO	35	0	2.0667	49.6000	9.0520	2.0667	9.0520	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

1998 Actual Emissions	
BEFORE CONTROLS	AFTER CONTROLS
0.0000	0.0000
0.0000	0.0000
0.0612	0.0612
3.5343	3.5343
0.2856	0.2856
3.5700	3.5700
0.0000	0.0000

E.F. based on AP-42

Emissions based on company's submittal of 8760 hours/year

Total: Starch Ring Dryer #3 (125-01-S)

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	143.7955	3,451.0909	629.8241	3.3073	14.4860	0.0050	19.8	86.9157	629.8241	14.4860
PM10	143.7955	3,451.0909	629.8241	3.3073	14.4860	0.0050	3.50	15.330	629.8241	14.4860
SOx	0.0354	0.8503	0.1552	0.0354	0.1552	#VALUE!			0.0612	0.0612
NOx	2.0460	49.1040	8.9615	2.0460	8.9615	#VALUE!			3.5343	3.5343
VOC	0.1653	3.9680	0.7242	0.1653	0.7242	#VALUE!			0.2856	0.2856
CO	2.0667	49.6000	9.0520	2.0667	9.0520	#VALUE!			3.5700	3.5700
HAPs	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!			0.0000	0.0000

PM10: 326 IAC 6-1-10.1(d): 3.50 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Stack Testing required for PM10

P5:S26: Waxy Corn Starch Storage Bins (#95-98)
(126-01-S thru 126-04-S)

MDR (T/hr): 20.5
YEARLY PROD (T/yr): 179580

STACK ID (DIAM:HEIGHT): 1';64'
FLOWRATE (ACFM): 2000
Ts(°F): 104

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.79	0.99	16.109	386.626	70.559	0.161	0.706	0.010
PM10	0.79	0.99	16.109	386.626	70.559	0.161	0.706	0.010
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A

PM10: 326 IAC 6-1-10.1(d): 0.16 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

Limited to 1 bin at a time per 326 IAC 6-1-10.1(d)

dP: 4 inches of water

P5:S27: Special Starch Process w/ Starch Ring Dryer #4 (128-01-S)
CNTRL DEV: Wet Scrubber

MDR (T/hr): 12.5
YEARLY PROD (T/yr): 109500

STACK ID (DIAM:HEIGHT): 6';30'
FLOWRATE (ACFM): 60000
Ts(*F): 104

SCC NO. 03-02-007-54			PERMITTED OPERATING HRS: 8760 hr/yr					
			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	13.53	0.98	169.149	4,059.574	740.872	3.383	14.817	0.007
PM10	13.53	0.98	169.149	4,059.574	740.872	3.383	14.817	0.007
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A

1998 Actual Emissions	
BEFORE CONTROLS	AFTER CONTROLS
740.872	14.817
740.872	14.817
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000

EF: back calculated using manufacturer's specifications of 0.007 gr/dscf grain loading
Actual Emissions based on 0.007 gr/dscf, and 8760 hrs/yr (company submittal)

P5:S27A: Special Starch Process w/ Starch Ring Dryer #4 (128-01-S)
In-Process Fuel Combustion

MDC (mmBtu/hr): 30
MDR (mmctf/yr): 0.0286

HEAT CONTENT (Btu/ctf): 1050
QTY BURNED (mmctf/yr): 98.70

STACK ID (DIAM:HEIGHT): 6';30'
FLOWRATE (ACFM): 60000
Ts(*F): 104

SCC NO. 03-02-007-54			PERMITTED OPERATING HRS: 8760 hr/yr					
			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(lbs/mmctf)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.000	0.000	0.000	0.000	0.000	0.000
PM10	0	0	0.000	0.000	0.000	0.000	0.000	0.000
SOx	0.6	0	0.017	0.411	0.075	0.017	0.075	N/A
NOx	140	0	4.000	96.000	17.520	4.000	17.520	N/A
VOC	2.8	0	0.080	1.920	0.350	0.080	0.350	N/A
CO	35	0	1.000	24.000	4.380	1.000	4.380	N/A
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A

1998 Actual Emissions	
BEFORE CONTROLS	AFTER CONTROLS
0.000	0.000
0.000	0.000
0.030	0.030
6.909	6.909
0.138	0.138
1.727	1.727
0.000	0.000

E.F. based on AP-42

Emissions based on company's submittal of 8760 hours/year

Total: Special Starch Process w/ Starch Ring Dryer #4 (128-01-S)

			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)				
PM	169.1489	4,059.5745	740.8723	3.3830	14.8174	0.0070	14.5	63.5033	740.8723	14.8174		
PM10	169.1489	4,059.5745	740.8723	3.3830	14.8174	0.0070	3.5	15.330	740.8723	14.8174		
SOx	0.0171	0.4114	0.0751	0.0171	0.0751	#VALUE!			0.0296	0.0296		
NOx	4.0000	96.0000	17.5200	4.0000	17.5200	#VALUE!			6.9090	6.9090		
VOC	0.0800	1.9200	0.3504	0.0800	0.3504	#VALUE!			0.1382	0.1382		
CO	1.0000	24.0000	4.3800	1.0000	4.3800	#VALUE!			1.7273	1.7273		
HAPs	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!			0.0000	0.0000		

PM10: 326 IAC 6-1-10.1(d): 3.5 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Stack Testing required for PM10

Reactors #1- 8 (128-06-S through 128-13-S)

MDR (batches/hr): 0.333
YEARLY PROD (T/yr): N/A

STACK ID (DIAM:HEIGHT): (1': 95)
FLOWRATE (ACFM): 1000
Ts(°F): 1300

CNTRL DEV: Thermal Oxidizer (PK9030)
Stack ID #5

PERMITTED OPERATING HRS: **8760** hr/yr

SCC NO. 3-02-014-01			POTENTIAL EMISSIONS					
POLLUTANT	EF(LB/batch)	CE (%)	BEFORE CONTROLS			AFTER CONTROL		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.00	0.00	0.00	0.00	0.00	0.000
PM10	0	0	0.00	0.00	0.00	0.00	0.00	0.000
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
VOC	200	0.98	66.67	1,600.00	292.00	1.33	5.84	N/A
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A
HAPs	200	0.98	66.67	1,600.00	292.00	1.33	5.84	N/A

HAPs: PO
based on max propylene oxide (PO) emissions of 200 lbs/batch, 8 batches/day, 365 d/yr.

**Thermal Oxidizer PK9030
(Natural Gas Combustion)**

MDC (mmBtu/hr): 1
MDR (mmcf/hr): 0.0010

HEAT CONTENT (Btu/cft): 1000
QTY BURNED (mmcf/yr): N/A

STACK ID (DIAM:HEIGHT): (1': 95)
FLOWRATE (ACFM): 1000
Ts(°F): 1300

Stack ID #5

PERMITTED OPERATING HRS: **8760** hr/yr

SCC NO. 1-02-006-03			POTENTIAL EMISSIONS					
POLLUTANT	EF(lbs/mmcf)	CE (%)	BEFORE CONTROL			AFTER CONTROL		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	7.6	0	0.008	0.182	0.033	0.008	0.033	0.003
PM10	7.6	0	0.008	0.182	0.033	0.008	0.033	0.003
SOx	0.6	0	0.001	0.014	0.003	0.001	0.003	N/A
NOx	100	0	0.100	2.400	0.438	0.100	0.438	N/A
VOC	5.5	0	0.006	0.132	0.024	0.006	0.024	N/A
CO	84	0	0.084	2.016	0.368	0.084	0.368	N/A
HAPs	0.0005	0	0.000	0.000	0.000	0.000	0.000	N/A

emissions below State registration or permit thresholds

Starch reactors in building 54 (54-01 through 54-12) retired as per Special Starch Process mod "Starch Channelization Project" 4/21/99.
HCl tank (54-16) and Acetic Anhydride tank (37-01) retired and removed as per this review.
Sodium Sulfate Bag dump (52-02) retired and removed. Replaced with Sodium Sulfate system (128-25 and 128-26).

Total: Reactors #1- 8 (128-06-S through 128-13-S)

POLLUTANT	POTENTIAL TO EMIT			ALLOWABLE			1998 Actual Emissions	
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	BEFORE CONTROLS	AFTER CONTROLS
PM	0.0076	0.1824	0.0333	0.0076	0.0333	0.0029	0.0000	0.0000
PM10	0.0076	0.1824	0.0333	0.0076	0.0333	0.0029	0.0000	0.0000
SOx	0.0006	0.0144	0.0026	0.0006	0.0026	#VALUE!	0.0000	0.0000
NOx	0.1000	2.4000	0.4380	0.1000	0.4380	#VALUE!	0.0000	0.0000
VOC	66.6722	1,600.1320	292.0241	1.3388	5.8641	#VALUE!	0.0000	0.0000
CO	0.0840	2.0160	0.3679	0.0840	0.3679	#VALUE!	0.0000	0.0000
HAPs	66.6667	1,600.0000	292.0000	1.3333	5.8400	#VALUE!	0.0000	0.0000

PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

**P5;S33: Corn Starch Blending Systems #1-#4
(130-01-S to 130-04-S)**

MDR (T/hr): 30
YEARLY PROD (T/yr): 262800

STACK ID (DIAM:HEIGHT):
FLOWRATE (ACFM): 5200
Ts(°F): 104

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: **8760** hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	1.40	0.99	41.884	1,005.228	183.454	0.419	1.835	0.010	1.3	5.504	183.454	1.835
PM10	1.40	0.99	41.884	1,005.228	183.454	0.419	1.835	0.010	0.42	1.840	183.454	1.835
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.000	0.000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.42 lbs/hr; 0.01 gr/dscf (combined)
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P5:S34: Dextrin Blender
(130-05-S)

CNTRL DEV: Dust Collector

MDR (T/hr): 30
YEARLY PROD (T/yr): 262800

STACK ID (DIAM:HEIGHT):
FLOWRATE (ACFM): 3000
Ts(°F): 90

			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT		ALLOWABLE		1998 Actual Emissions	
SCC NO. 03-02-014-01			BEFORE CONTROLS			AFTER CONTROLS							BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)				
PM	0.83	0.99	24.779	594.701	108.533	0.248	1.085	0.010	0.7	3.256			108.533	1.085
PM10	0.83	0.99	24.779	594.701	108.533	0.248	1.085	0.010	0.248	1.086			108.533	1.085
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A					0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.248 lbs/hr; 0.01 gr/dscf (combined)
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P5:S31: Starch Loadout Fugitives (Truck)
(128-16-S-F)

CNTRL DEV: None

MDR (Trucks/hr): 0.17
YEARLY PROD (Trucks/yr): 1460

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT		ALLOWABLE		1998 Actual Emissions	
(Fugitive Emissions) SCC NO. 03-02-007-55			BEFORE CONTROLS			AFTER CONTROLS							BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/Truck)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)				
PM	5	0	0.833	20.000	3.650	0.833	3.650	N/A					3.650	3.650
PM10	5	0	0.833	20.000	3.650	0.833	3.650	N/A					3.650	3.650
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000

E.F. Based on info from Decatur Plant
Emissions based on 4 trucks/day

P5:S32: Starch Loadout Fugitives (Railcar)
(128-17-S-F)

CNTRL DEV: None

MDR (Cars/hr): 0.024
YEARLY PROD (Cars/yr): 208

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT		ALLOWABLE		1998 Actual Emissions	
(Fugitive) SCC NO. 03-02-007-55			BEFORE CONTROLS			AFTER CONTROLS							BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)				
PM	17.78	0	0.422	10.132	1.849	0.422	1.849	N/A					1.849	1.849
PM10	17.78	0	0.422	10.132	1.849	0.422	1.849	N/A					1.849	1.849
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A					0.000	0.000

E.F. Based on info from Decatur Plant
Emissions based on 4 cars/week; 52 weeks/year

P5:S29: Propylene Oxide Station - Outdoor
(128-14-S-F)

CNTRL DEV: None

MDR (T/hr): 0.0001
YEARLY PURCHASE (T/yr): 0.876

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT		ALLOWABLE		1998 Actual Emissions	
(Fugitive Emissions) SCC NO. 03-02-007-52			BEFORE CONTROLS			AFTER CONTROLS							BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)				
PM	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000					0.0000	0.0000
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000					0.0000	0.0000
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A					0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A					0.0000	0.0000
VOC	2000	0	0.2000	4.8000	0.8760	0.2000	0.8760	N/A					0.8760	0.8760
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A					0.0000	0.0000
HAP	2000	0	0.2000	4.8000	0.8760	0.2000	0.8760	N/A					0.8760	0.8760

Emissions based on SOCM1 factors

P5:S30: Building 128 PO Emissions
(128-15-S)
CNTRL DEV: None

MDR (T/yr): 0.0004
YEARLY PURCHASE (T/yr): 3.066

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts("F): N/A

			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		1998 Actual Emissions	
(Fugitive Emissions) SCC NO. 03-02-007-52			POTENTIAL TO EMIT								BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A		0.0000	0.0000	
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A		0.0000	0.0000	
VOC	2000	0	0.7000	16.8000	3.0660	0.7000	3.0660	N/A		3.0660	3.0660	
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A		0.0000	0.0000	
HAP	2000	0	0.7000	16.8000	3.0660	0.7000	3.0660	N/A		3.0660	3.0660	

Emissions based on SOCM factors

Unit ID 54-17-S
Building 54 PO Emissions
CNTRL DEV: None

MDR (T/yr): 0.0001
YEARLY PURCHASE (T/yr): 1.007

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts("F): N/A

			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		1998 Actual Emissions	
(Fugitive Emissions) SCC NO. 03-02-007-52			POTENTIAL TO EMIT								BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A		0.0000	0.0000	
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A		0.0000	0.0000	
VOC	2000	0	0.2300	5.2000	1.0074	0.2300	1.0074	N/A		1.0074	1.0074	
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A		0.0000	0.0000	
HAP	2000	0	0.2300	5.2000	1.0074	0.2300	1.0074	N/A		1.0074	1.0074	

Emissions based on SOCM factors

Propylene Oxide Storage Tank
(93-18)

MDR (gallons): 927936
YEARLY PROD (gallons/yr): 927936

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts("F): N/A

			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		COMPANY ACTUAL	
SCC NO. 4-07-208-03			POTENTIAL EMISSIONS								BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/1000gal)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0	0	0.000	0.000	0.000	0.000	0.000	0		0.000	0.000	
PM10	0	0	0.000	0.000	0.000	0.000	0.000	0		0.000	0.000	
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A		0.000	0.000	
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A		0.000	0.000	
VOC	0	0	1.027	24.658	4.500	1.027	4.500	N/A		4.500	4.500	
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A		0.000	0.000	
HAPs	0	0	1.027	24.658	4.500	1.027	4.500	N/A		4.500	4.500	

HAP: Propylene oxide

Total: Stack Emissions - Starch Production Area

			POTENTIAL TO EMIT						ALLOWABLE		COMPANY ACTUAL	
POLLUTANT	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS		
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)						
PM	1,067.147	25,611.528	4,674	14.240	62	0.220	64.874	284.147	4,674	62		
PM10	1,067.147	25,611.528	4,674	14.240	62	0.220	14.602	63.958	4,674	62		
SOx	0.067	1.619	0	0.067	0	#VALUE!	0.000	0.000	0	0		
NOx	6.971	167.304	31	6.971	31	#VALUE!	0.000	0.000	12	12		
VOC	68.012	1,632.278	298	2.678	12	#VALUE!	0.000	0.000	5	5		
CO	3.984	95.616	17	3.984	17	#VALUE!	0.000	0.000	7	7		
HAPs	67.694	1,624.658	297	2.361	10	#VALUE!	0.000	0.000	5	5		

HAPs: Propylene oxide

Total: Fugitive Emissions - Starch Production Area

			POTENTIAL TO EMIT						ALLOWABLE		COMPANY ACTUAL	
POLLUTANT	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS		
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)						
PM	1.256	30.132	5	1.256	5	#VALUE!	0.000	0.000	5	5		
PM10	1.256	30.132	5	1.256	5	#VALUE!	0.000	0.000	5	5		
SOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0		
NOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0		
VOC	1.130	27.120	5	1.130	5	#VALUE!	0.000	0.000	5	5		
CO	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0		
HAPs	1.130	27.120	5	1.130	5	#VALUE!	0.000	0.000	5	5		

HAPs: Propylene oxide

Starch Warehouse Area

Channel 2 Filter Receiver

93-32

CNTRL DEV: Bag Filter Dust Collector

MDR (T/hr): 15
YEARLY PROD (T/yr): N/A

STACK ID (DIAM.HEIGHT): (1': 77.5')
FLOWRATE (ACFM): 2400
Ts(°F): 90

Starch Filtering - SCC # 3-02-014-06

AP-42 Factors

PERMITTED OPERATING HRS: **8760** hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL EMISSIONS			AFTER CONTROL:			ALLOWABLE	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	0.05	0.99	0.750	18.000	3.285	0.008	0.033	0.0004	0.10	0.43
PM10	0.0125	0.99	0.188	4.500	0.821	0.002	0.008	0.0001	0.10	0.43
SOx	0	0	0	0	0	0	0	N/A		
NOx	0	0	0	0	0	0	0	N/A		
VOC	0	0	0	0	0	0	0	N/A		
CO	0	0	0	0	0	0	0	N/A		
HAPs	0	0	0	0	0	0	0	N/A		

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Storage Bin Loading).
(PM) EF = 0.020 lb/ton * 2.5 = 0.05 lb/ton (PM10) EF = 0.005 lb/ton * 2.5 = 0.0125 lb/ton
Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

0.005 gr/dscf
Manufacturer's specifications
326 IAC 6-1-2 (h)

Channel 3 Filter Receiver

93-33

CNTRL DEV: Bag Filter Dust Collector

MDR (T/hr): 25
YEARLY PROD (T/yr): N/A

STACK ID (DIAM.HEIGHT): (1': 77.5')
FLOWRATE (ACFM): 2400
Ts(°F): 90

Starch Filtering - SCC # 3-02-014-06

AP-42 Factors

PERMITTED OPERATING HRS: **8760** hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL EMISSIONS			AFTER CONTROL:			ALLOWABLE	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	0.05	0.99	1.250	30.000	5.475	0.013	0.055	0.0006	0.10	0.43
PM10	0.0125	0.99	0.313	7.500	1.369	0.003	0.014	0.0002	0.10	0.43
SOx	0	0	0	0	0	0	0	N/A		
NOx	0	0	0	0	0	0	0	N/A		
VOC	0	0	0	0	0	0	0	N/A		
CO	0	0	0	0	0	0	0	N/A		
HAPs	0	0	0	0	0	0	0	N/A		

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Product Loadout).
(PM) EF = 0.011 lb/ton * 2.5 = 0.0275 lb/ton (PM10) EF = 0.003 lb/ton * 2.5 = 0.0075 lb/ton
Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

0.005 gr/dscf
Manufacturer's specifications
326 IAC 6-1-2 (h)

Channel 2/3 Packaging

93-36

CNTRL DEV: Bag Filter Dust Collector

MDR (T/hr): 40
YEARLY PROD (T/yr): N/A

STACK ID (DIAM.HEIGHT): (2': 10')
FLOWRATE (ACFM): 12000
Ts(°F): 70

Starch Bulk Loadout - SCC # 3-02-014-08

AP-42 Factors

PERMITTED OPERATING HRS: **8760** hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL EMISSIONS			AFTER CONTROL:			ALLOWABLE	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	0.0275	0.99	1.100	26.400	4.818	0.011	0.048	0.0001	0.51	2.25
PM10	0.0075	0.99	0.300	7.200	1.314	0.003	0.013	0.0000	0.51	2.25
SOx	0	0	0	0	0	0	0	N/A		
NOx	0	0	0	0	0	0	0	N/A		
VOC	0	0	0	0	0	0	0	N/A		
CO	0	0	0	0	0	0	0	N/A		
HAPs	0	0	0	0	0	0	0	N/A		

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Product Loadout).
(PM) EF = 0.011 lb/ton * 2.5 = 0.0275 lb/ton (PM10) EF = 0.003 lb/ton * 2.5 = 0.0075 lb/ton
Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

0.005 gr/dscf
Manufacturer's specifications
326 IAC 6-1-2 (h)

Channel 4 Filter Receiver

93-34

CNTRL DEV: Bag Filter Dust Collector

MDR (T/hr): 15
YEARLY PROD (T/yr): N/A

STACK ID (DIAM.HEIGHT): (1': 77.5')
FLOWRATE (ACFM): 2400
Ts(°F): 90

Starch Filtering - SCC # 3-02-014-06

AP-42 Factors

PERMITTED OPERATING HRS: **8760** hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL EMISSIONS			AFTER CONTROL:			ALLOWABLE	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	0.05	0.99	0.750	18.000	3.285	0.008	0.033	0.0004	0.10	0.43
PM10	0.0125	0.99	0.188	4.500	0.821	0.002	0.008	0.0001	0.10	0.43
SOx	0	0	0	0	0	0	0	N/A		
NOx	0	0	0	0	0	0	0	N/A		
VOC	0	0	0	0	0	0	0	N/A		
CO	0	0	0	0	0	0	0	N/A		
HAPs	0	0	0	0	0	0	0	N/A		

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Product Loadout).
(PM) EF = 0.020 lb/ton * 2.5 = 0.05 lb/ton (PM10) EF = 0.005 lb/ton * 2.5 = 0.0125 lb/ton
Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

0.005 gr/dscf
Manufacturer's specifications
326 IAC 6-1-2 (h)

Dextrin Filter Receiver

93-35

CNTRL DEV: Bag Filter Dust Collector

MDR (T/hr): 4.5
YEARLY PROD (T/yr): N/A

STACK ID (DIAM/HEIGHT): (1': 77.5')
FLOWRATE (ACFM): 2400
Ts(°F): 90

POLLUTANT	AP-42 Factors EF(LB/T)	CE (%)	POTENTIAL EMISSIONS						ALLOWABLE	
			BEFORE CONTROLS			AFTER CONTROL			(lbs/hr)	(TPY)
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	0.05	0.99	0.225	5.400	0.986	0.002	0.010	0.0001	0.10	0.43
PM10	0.0125	0.99	0.056	1.350	0.246	0.001	0.002	0.0000	0.10	0.43
SOx	0	0	0	0	0	0	0	N/A		
NOx	0	0	0	0	0	0	0	N/A		
VOC	0	0	0	0	0	0	0	N/A		
CO	0	0	0	0	0	0	0	N/A		
HAPs	0	0	0	0	0	0	0	N/A		

0.005 gr/dscf
Manufacturer's specifications
326 IAC 6-1-2 (h)

Channel 1/4 (Dextrin) Packaging

93-37

CNTRL DEV: Bag Filter Dust Collector

MDR (T/hr): 40
YEARLY PROD (T/yr): N/A

STACK ID (DIAM/HEIGHT): (2': 10')
FLOWRATE (ACFM): 12000
Ts(°F): 70

POLLUTANT	AP-42 Factors EF(LB/T)	CE (%)	POTENTIAL EMISSIONS						ALLOWABLE	
			BEFORE CONTROLS			AFTER CONTROL			(lbs/hr)	(TPY)
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	0.0275	0.99	1.100	26.400	4.818	0.011	0.048	0.0001	0.51	2.25
PM10	0.0075	0.99	0.300	7.200	1.314	0.003	0.013	0.0000	0.51	2.25
SOx	0	0	0	0	0	0	0	N/A		
NOx	0	0	0	0	0	0	0	N/A		
VOC	0	0	0	0	0	0	0	N/A		
CO	0	0	0	0	0	0	0	N/A		
HAPs	0	0	0	0	0	0	0	N/A		

0.005 gr/dscf
Manufacturer's specifications
326 IAC 6-1-2 (h)

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Product Loadout).
(PM) EF = 0.011 lb/ton * 2.5 = 0.0275 lb/ton (PM10) EF = 0.003 lb/ton * 2.5 = 0.0075 lb/ton
Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

P6:S2: Frodex Conveying System

(93-04-W)

CNTRL DEV: Dust Collector

MDR (T/hr): 15
YEARLY PROD (T/yr): 131400

STACK ID (DIAM/HEIGHT): 1'65"
FLOWRATE (ACFM): 800
Ts(°F): 70

POLLUTANT	SCC NO.	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
				BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.46	0.99	6.857	164.571	30.034	0.069	0.300	0.010	0.2	0.901	30.034	0.300	
PM10	0.46	0.99	6.857	164.571	30.034	0.069	0.300	0.010	0.069	0.302	30.034	0.300	
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000	
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000	
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000	
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000	
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.000	0.000	

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.069 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P6:S3: Corn Syrup Solids Conveying System

(93-05-W)

CNTRL DEV: Dust Collector

MDR (T/hr): 10
YEARLY PROD (T/yr): 87600

STACK ID (DIAM/HEIGHT): 1'45"
FLOWRATE (ACFM): 800
Ts(°F): 90

POLLUTANT	SCC NO.	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
				BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.66	0.99	6.608	158.587	28.942	0.066	0.289	0.010	0.2	0.868	28.942	0.289	
PM10	0.66	0.99	6.608	158.587	28.942	0.066	0.289	0.010	0.066	0.289	28.942	0.289	
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000	
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000	
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000	
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000	
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000	

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.066 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P6:S5: Frodex Semi-Bulk Packing System
(93-08-W)
CNTRL DEV: Dust Collector

MDR (T/hr): 10
YEARLY PROD (T/yr): 87600

STACK ID (DIAM.HEIGHT): 1';25'
FLOWRATE (ACFM): 1000
Ts(°F): 90

SCC NO.			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	1998 Actual Emissions	BEFORE CONTROLS	AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0.83	0.99	8.260	198.234	36.178	0.083	0.362	0.010	0.2	1.085	36.178	0.362			
PM10	0.83	0.99	8.260	198.234	36.178	0.083	0.362	0.010	0.083	0.364	36.178	0.362			
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.000	0.000			

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.083 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 4 inches of water

P6:S6: Cornstarch Bag Dumping Station #1 and #2
(93-09-W and 93-10-W)
CNTRL DEV: Dust Collector

MDR (T/hr): 2.4
YEARLY PROD (T/yr): 21024

STACK ID (DIAM.HEIGHT): 1';10'
FLOWRATE (ACFM): 1200
Ts(°F): 90

SCC NO. 4-02-013-01			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	1998 Actual Emissions	BEFORE CONTROLS	AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	4.13	0.99	9.912	237.881	43.413	0.099	0.434	0.010	0.3	1.302	43.413	0.434			
PM10	4.13	0.99	9.912	237.881	43.413	0.099	0.434	0.010	0.20	0.876	43.413	0.434			
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.000	0.000			

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.10 lbs/hr; 0.01 gr/dscf each
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P6:S7: Starch Bulk Loading
(93-14-W)
CNTRL DEV: Dust Collector

MDR (T/hr): 30
YEARLY PROD (T/yr): 262800

STACK ID (DIAM.HEIGHT): 1';68'
FLOWRATE (ACFM): 3300
Ts(°F): 90

SCC NO. 4-02-013-01			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	1998 Actual Emissions	BEFORE CONTROLS	AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	0.91	0.99	27.257	654.171	119.386	0.273	1.194	0.010	0.8	3.582	119.386	1.194			
PM10	0.91	0.99	27.257	654.171	119.386	0.273	1.194	0.010	0.273	1.196	119.386	1.194			
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.273 lbs/hr; 0.01 gr/dscf each
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 4 inches of water

P6:S8: Starch Vacuum Cleanup System
(93-15-W)
CNTRL DEV: Dust Collector

MDR (T/hr): 1
YEARLY PROD (T/yr): 8760

STACK ID (DIAM.HEIGHT): 1';15'
FLOWRATE (ACFM): 250
Ts(°F): 90

SCC NO. 4-02-013-01			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT			ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	1998 Actual Emissions	BEFORE CONTROLS	AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)							
PM	2.06	0.99	2.065	49.558	9.044	0.021	0.090	0.010	0.1	0.271	9.044	0.090			
PM10	2.06	0.99	2.065	49.558	9.044	0.021	0.090	0.010	0.021	0.092	9.044	0.090			
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000			

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.021 lbs/hr; 0.01 gr/dscf each
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P6;S9: Starch Mixing and Bagging System #1
(93-16-W)
CNTRL DEV: Dust Collector

MDR (T/hr): 25
YEARLY PROD (T/yr): 219000

STACK ID (DIAM.HEIGHT): 1';19"
FLOWRATE (ACFM): 1570
Ts(*F): 90

SCC NO.			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT		ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)						
PM	1.04	0.99	25.936	622.454	113.598	0.259	1.136	0.020	0.4	1.704	113.598	1.136		
PM10	1.04	0.99	25.936	622.454	113.598	0.259	1.136	0.020	0.130	0.569	113.598	1.136		
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.130 lbs/hr; 0.01 gr/dscf each
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P6;S10: Starch Mixing and Bagging System #2
(93-17-W)
CNTRL DEV: Dust Collector

MDR (T/hr): 12.5
YEARLY PROD (T/yr): 109500

STACK ID (DIAM.HEIGHT): 1';33"
FLOWRATE (ACFM): 3200
Ts(*F): 90

SCC NO. 4-02-013-01			PERMITTED OPERATING HRS: 8760 hr/yr						POTENTIAL TO EMIT		ALLOWABLE		1998 Actual Emissions	
POLLUTANT	EF(LB/T)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)						
PM	4.23	0.99	52.862	1,268.696	231.537	0.529	2.315	0.020	0.8	3.473	231.537	2.315		
PM10	4.23	0.99	52.862	1,268.696	231.537	0.529	2.315	0.020	0.264	1.156	231.537	2.315		
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000		

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.264 lbs/hr; 0.01 gr/dscf each
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Total: Starch Warehouse Area

POLLUTANT	BEFORE CONTROLS			AFTER CONTROLS			ALLOWABLE		COMPANY ACTUAL	
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
PM	144.931	3,478.353	635	1.449	6	0.102	4.436	19.429	612	6
PM10	141.100	3,386.403	618	1.411	6	0.100	2.531	11.086	612	6
SOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
NOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
VOC	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
CO	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
HAPs	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0

No HAPs

Units replaced as per review (089-12593-00203)

P6;S1: Cornstarch Conveying #46 and #47 and Dextrin Conveying #48 (93-01 through 93-03)

P6;S4: Starch Packing Systems #43 and #44(93-06 and 93-07)

Refinery Area

P4:S1: Bulk Carbon/Filter Aid System
(17-03-R)
CNTRL DEV: None

MDR (T/hr): 17.5
YEARLY PROD (T/yr): 153,300

STACK ID (DIAM:HEIGHT): 1'; 95'
FLOWRATE (ACFM): 745
Ts(°F): 100

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.35	0.99	6.044	145.047	26.471	0.060	0.265	0.010	0.2	0.7941	26.4711	0.2647
PM10	0.35	0.99	6.044	145.047	26.471	0.060	0.265	0.010	0.06	0.3	26.4711	0.2647
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.06 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 6 inches of water

P4:S2: #2 Corn Syrup Solids Manufacturing
(18-03-R)
CNTRL DEV: Dust Collector

MDR (T/hr): 2.7
YEARLY PROD (T/yr): 23652

STACK ID (DIAM:HEIGHT): 1'; 30'
FLOWRATE (ACFM): 3670
Ts(°F): 105

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	10.93	0.99	29.508	708.203	129.247	0.295	1.292	0.010	0.9	3.877	129.247	1.292
PM10	10.93	0.99	29.508	708.203	129.247	0.295	1.292	0.010	0.30	1.31	129.247	1.292
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.30 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 6 inches of water

P4:S3: #4 Corn Syrup Spray Dryer
(100-03-R)
CNTRL DEV: Dust Collector

MDR (T/hr): 4.8
YEARLY PROD (T/yr): 42048

STACK ID (DIAM:HEIGHT): 8'; 90'
FLOWRATE (ACFM): 50000
Ts(°F): 110

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	83.02	0.99	398.50	9,563.9	1,745.41	3.985	17.454	0.010	12.0	52.362	1,745.414	17.454
PM10	83.02	0.99	398.50	9,563.9	1,745.41	3.985	17.454	0.010	4.2	18.4	1,745.414	17.454
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 4.2 lbs/hr; 0.01 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Stack Testing required for PM10

Corn Syrup Spray Dryer/Cooler System #3
(100-01-R-P)
CNTRL DEV: Wet Venturi Scrubber

MDR (T/hr): 3.849
YEARLY PROD (T/yr):

STACK ID (DIAM:HEIGHT): 8.6'; 100'
FLOWRATE (ACFM): 42187
Ts(°F): 120

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	85.85	0.99	330.43	7,930.3	1,447.28	3.304	14.473	0.010	9.9	43.419	0.0000	0.0000
PM10	85.85	0.99	330.43	7,930.3	1,447.28	3.304	14.473	0.010	2.71	11.870	0.0000	0.0000
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 4.96 lbs/hr; 0.015 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

Stack Testing required for PM10

P4;S5: Activated Carbon Regeneration Furnace #2
(104-01-R)
CNTRL DEV: Scrubber

MDR (T/hr): 1.146
YEARLY PROD (T/yr): 10038.96

STACK ID (DIAM:HEIGHT): 2';110'
FLOWRATE (ACFM): 6622
Ts(°F): 160

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	SCC NO.	EF(LB/T)	CE (%)	POTENTIAL TO EMIT					
				BEFORE CONTROLS			AFTER CONTROLS		
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	03-02-007-54	31.75	0.98	36.390	873.372	159.390	0.728	3.188	0.015
PM10		31.75	0.98	36.390	873.372	159.390	0.728	3.188	0.015
SOx		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
NOx		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
VOC		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
CO		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
HAPs		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

1998 Actual Emissions	
BEFORE CONTROLS	AFTER CONTROLS
159.390	3.188
159.390	3.188
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.015 gr/dscf grain loading
Actual Emissions based on 0.015 gr/dscf, and 8760 hrs/yr (company submittal)

P4;S5A: Activated Carbon Regeneration Furnace #2
In-Process Fuel Combustion
(104-01-R)
CNTRL DEV: NONE

MDC (mmBtu/hr): 13.2
MDR (mmctf/yr): 0.0126

HEAT CONTENT (Btu/cft): 1050
QTY BURNED (mmctf/yr): 43.40

STACK ID (DIAM:HEIGHT): 2';110'
FLOWRATE (ACFM): 6622
Ts(°F): 160

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	SCC NO.	EF(lbs/mmctf)	CE (%)	POTENTIAL TO EMIT					
				BEFORE CONTROLS			AFTER CONTROLS		
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	03-02-007-54	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PM10		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SOx		0.6	0	0.0075	0.1810	0.0330	0.0075	0.0330	N/A
NOx		140	0	1.7600	42.2400	7.7088	1.7600	7.7088	N/A
VOC		2.8	0	0.0352	0.8448	0.1542	0.0352	0.1542	N/A
CO		35	0	0.4400	10.5600	1.9272	0.4400	1.9272	N/A
HAPs		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

1998 Actual Emissions	
BEFORE CONTROLS	AFTER CONTROLS
0.0000	0.0000
0.0000	0.0000
0.0130	0.0130
3.0380	3.0380
0.0608	0.0608
0.7595	0.7595
0.0000	0.0000

E.F. based on AP-42

Emissions based on company's submittal of 8760 hours/year

Total: P4;S5: Activated Carbon Regeneration Furnace #2

POLLUTANT	POTENTIAL TO EMIT					ALLOWABLE		1998 Actual Emissions		
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	36.3905	873.3716	159.3903	0.7278	3.1878	0.0150	1.5	6.376	159.3903	3.1878
PM10	36.3905	873.3716	159.3903	0.7278	3.1878	0.0150	0.728	3.189	159.3903	3.1878
SOx	0.0075	0.1810	0.0330	0.0075	0.0330	#VALUE!			0.0130	0.0130
NOx	1.7600	42.2400	7.7088	1.7600	7.7088	#VALUE!			3.0380	3.0380
VOC	0.0352	0.8448	0.1542	0.0352	0.1542	#VALUE!			0.0608	0.0608
CO	0.4400	10.5600	1.9272	0.4400	1.9272	#VALUE!			0.7595	0.7595
HAPs	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!			0.0000	0.0000

PM10: 326 IAC 6-1-10.1(d): 0.728 lbs/hr; 0.015 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

P4; S6: Soda Ash Tank
(104-02-R)
CNTRL DEV: Venturi Scrubber

MDR (T/hr): 15
YEARLY PROD (T/yr): 1650

STACK ID (DIAM:HEIGHT): 1';70'
FLOWRATE (ACFM): 1000
Ts(°F): 130

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	SCC NO.	EF(LB/T)	CE (%)	POTENTIAL TO EMIT					
				BEFORE CONTROLS			AFTER CONTROLS		
				(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	103	1.03	0.99	15.400	369.588	67.450	0.154	0.674	0.020
PM10		1.03	0.99	15.400	369.588	67.450	0.154	0.674	0.020
SOx		0	0	0.000	0.000	0.000	0.000	0.000	N/A
NOx		0	0	0.000	0.000	0.000	0.000	0.000	N/A
VOC		0	0	0.000	0.000	0.000	0.000	0.000	N/A
CO		0	0	0.000	0.000	0.000	0.000	0.000	N/A
HAPs		0	0	0.000	0.000	0.000	0.000	0.000	N/A

PM10: 326 IAC 6-1-10.1(d): 0.154 lbs/hr; 0.02 gr/dscf
PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

1998 Actual Emissions	
BEFORE CONTROLS	AFTER CONTROLS
0.847	0.008
0.847	0.008
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000

P4:S8: Filter Aid Hopper
(104-03-R)

MDR (T/hr): 0.75
YEARLY PROD (T/yr): 6570

STACK ID (DIAM:HEIGHT): 1',40"
FLOWRATE (ACFM): 250
Ts(°F): 60

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	5.82	0.99	4.368	104.835	19.132	0.044	0.191	0.020	0.1	0.287	19.132	0.191
PM10	5.82	0.99	4.368	104.835	19.132	0.044	0.191	0.020	0.044	0.193	19.132	0.191
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading

Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.044 lbs/hr; 0.02 gr/dscf

PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 6 inches of water

P4:S9: Sodium Bisulfate Bag Dump
(104-05-R)

MDR (T/hr): 0.7
YEARLY PROD (T/yr): 6132

STACK ID (DIAM:HEIGHT): 1',40"
FLOWRATE (ACFM): 460
Ts(°F): 60

CNTRL DEV: Dust Collector

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	11.48	0.99	8.0374	192.8967	35.2036	0.0804	0.3520	0.0200	0.1	0.5281	35.2036	0.3520
PM10	11.48	0.99	8.0374	192.8967	35.2036	0.0804	0.3520	0.0200	0.080	0.3504	35.2036	0.3520
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading

Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

PM10: 326 IAC 6-1-10.1(d): 0.080 lbs/hr; 0.02 gr/dscf

PM: 326 IAC 6-1-2(a): 0.03 gr/dscf

dP: 6 inches of water

Unit ID 15-06-R

Building 15 HCl Emissions (Indoor)

MDR (T/hr): 0.0003
YEARLY PURCHASE (T/yr): 7.277
(All Toluene Emissions)

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

CNTRL DEV: None

Vent through general building ventilation

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.000
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.000
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	2000	0	0.6000	14.4000	2.6280	0.6000	2.6280	N/A			7.2770	7.2770
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAP	2000	0	0.6000	14.4000	2.6280	0.6000	2.6280	N/A			7.2770	7.2770

Emissions based on SOCFI factors

HAP: Hydrogen chloride

Unit ID 15-07-F

Building 15 HCl Emissions (Outdoor)

MDR (T/hr): 0.00015
YEARLY PURCHASE (T/yr): 0.000

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.000
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.000
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	2000	0	0.3000	7.2000	1.3140	0.3000	1.3140	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAP	2000	0	0.3000	7.2000	1.3140	0.3000	1.3140	N/A			0.0000	0.0000

Emissions based on SOCFI factors

HAP: Hydrogen chloride

Total: Stack Emissions - Refinery Area

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	828.674	19,888.177	3,630	8.651	38	0.115	24.807	108.655	2,116	23
PM10	828.674	19,888.177	3,630	8.651	38	0.115	8.276	36.249	2,116	23
SOx	0.008	0.181	0	0.008	0	#VALUE!	0.000	0.000	0	0
NOx	1.760	42.240	8	1.760	8	#VALUE!	0.000	0.000	3	3
VOC	0.035	0.845	0	0.035	0	#VALUE!	0.000	0.000	0	0
CO	0.440	10.560	2	0.440	2	#VALUE!	0.000	0.000	1	1
HAPs	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0

HAPs: None

Total: Fugitive Emissions - Refinery Area

POLLUTANT	POTENTIAL TO EMIT						ALLOWABLE		1998 Actual Emissions	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
PM10	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
SOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
NOx	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
VOC	0.900	21.600	4	0.900	3.9	#VALUE!	0.000	0.000	7	7
CO	0.000	0.000	0	0.000	0	#VALUE!	0.000	0.000	0	0
HAPs	0.900	21.600	4	0.900	3.9	#VALUE!	0.000	0.000	7	7

HAPs: HCl

Channel 3 Refinery Area

Diatomaceous Earth Unloading Silo

104B RR track
CNTRL DEV: Smoot Bin Vent Filter
DC2312

MDR (T/hr): 20
YEARLY PROD (T/yr): 175200

STACK ID (DIAM:HEIGHT): (0.5': 85')
FLOWRATE (ACFM): 750
Ts('F): 68

PERMITTED OPERATING HRS: **576** hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.029	0.99	0.580	4.640	0.167	0.006	0.002	0.001	0.064	0.019	2.540	0.025
PM10	0.03	0.99	0.600	4.800	0.173	0.006	0.002	0.001	0.064	0.019	2.628	0.026
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000

*This point is classed "State Exempt" because it has potential emissions below the State's registration thresholds.

PM: 326 IAC 6-1-2(h) and Construction Permit
Condition #1: 0.01 gr/dscf
as per manufacturer's specifications
and maximum emissions after controls
per application

Emission Factor (EF) from FIRE Version 5.0 - Transfer of Sand and Aggregate to Elevated Bins.
Max Rate (MDR) is Unloading 6 times per month for 8 hours and 1,920,000 lbs/month = 20 T/hr.

Diatomaceous Earth

104A Bldg.

Not installed

Transfer System
CNTRL DEV: none

MDR (T/hr): 0
YEARLY PROD (T/yr): 0

STACK ID (DIAM:HEIGHT): (0.33': 58')
FLOWRATE (ACFM): 213
Ts('F): 68

PERMITTED OPERATING HRS: **1460** hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.02	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PM10	0.02	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000

*This point is classed "State Exempt" because it has potential emissions below the State's registration thresholds.

PM: 326 IAC 6-1-2(h) and Construction Permit
Condition #1: 0.01 gr/dscf
as per manufacturer's specifications
and maximum emissions after controls
per application

Emission Factor (EF) from FIRE Version 5.0 - Weigh Hopper Loading of Cement/Sand/Aggregate.
Max Rate (MDR) is D.E. transfer 6 times a day for 7 days a week for 40 minutes each time and 64,000 lbs/day = 8 T/hr.

Frodex Buffer Silo Vents

Not installed

Dust Collectors
DC7150 & 7160

MDR (T/hr): 0
YEARLY PROD (T/yr): 0

STACK ID (DIAM:HEIGHT): (0.5': 41')
FLOWRATE (ACFM): 200
Ts('F): 68

PERMITTED OPERATING HRS: **8760** hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.029	0.99	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.075	0.000	0.000
PM10	0.03	0.99	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.075	0.000	0.000
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000

*This point is classed "State Exempt" because it has potential emissions below the State's registration thresholds.

PM: 326 IAC 6-1-2(h) and Construction Permit
Condition #1: 0.01 gr/dscf
as per manufacturer's specifications
and maximum emissions after controls
per application

Emission Factor (EF) from FIRE Version 5.0 - Transfer of Sand and Aggregate to Elevated Bins.
Max Rate (MDR) is from application 20,000 lbs/hr = 10 T/hr.

Frodex Transfer Dust Collector

Not installed

dust collector

MDR (T/hr): 0
YEARLY PROD (T/yr): 0

STACK ID (DIAM:HEIGHT): (0.83': 25')
FLOWRATE (ACFM): 4000
Ts('F): 70

PERMITTED OPERATING HRS: **8760** hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.029	0.99	0.000	0.000	0.000	0.000	0.000	0.0000	0.342	1.496	0.000	0.000
PM10	0.03	0.99	0.000	0.000	0.000	0.000	0.000	0.0000	0.342	1.496	0.000	0.000
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A			0.000	0.000

*This point is classed "State Exempt" because it has potential emissions below the State's registration thresholds.

PM: 326 IAC 6-1-2(h) and Construction Permit
Condition #1: 0.01 gr/dscf
as per manufacturer's specifications
and maximum emissions after controls
per application

Emission Factor (EF) from FIRE Version 5.0 - Transfer of Sand and Aggregate to Elevated Bins.
Max Rate (MDR) is from application 40,000 lbs/hr = 20 T/hr.

